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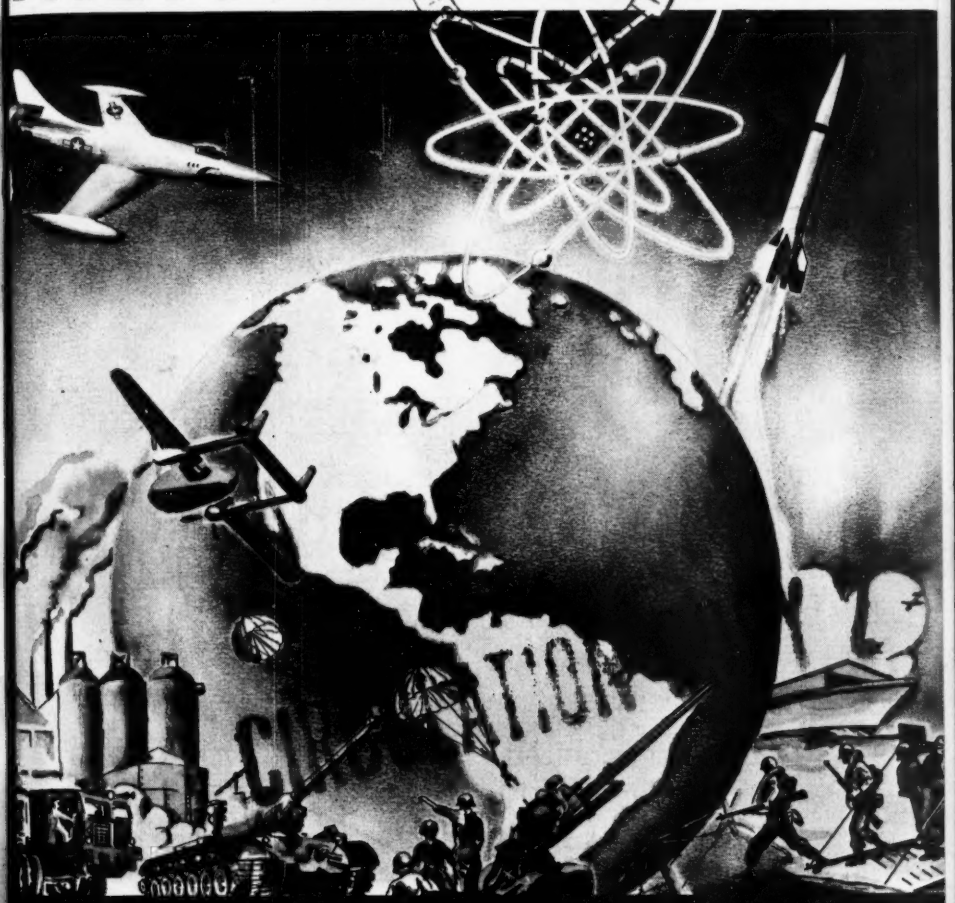

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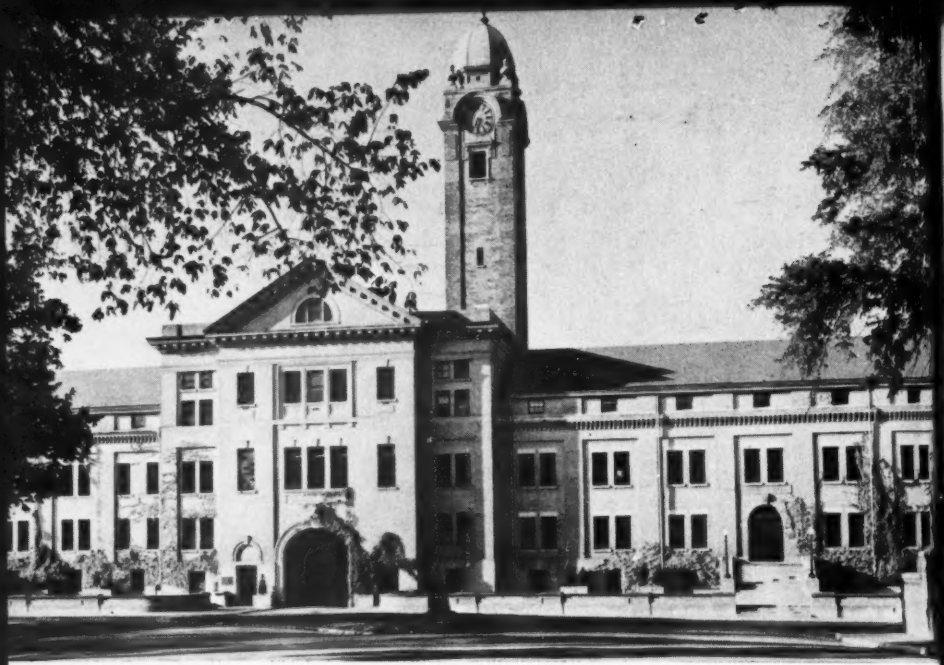

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A SOLUTION TO THE INFANTRY REPLACEMENT PROBLEM

This article was prepared by certain members of the Staff and Faculty of the Command and General Staff College and does not necessarily represent the views of the Department of the Army.—The Editor.

AN EXTRACT from a cable sent to the War Department by General John J. Pershing on 16 August 1918 read as follows: "Until sufficient replacements are available in France to keep our proven divisions at full strength, replacements should by all means be sent [overseas] in preference to new divisions."

Twenty-six years later, General George S. Patton, in a letter to General George C. Marshall, wrote: "My rifle companies are down to 2 men. When one of them goes, I'm going to take a rifle and go up and join the last man. I don't want him fighting by himself. . . . We need trained replacements desperately."

Add to these excerpts General Omar N. Bradley's comments contained in a memorandum dated 15 December 1944, to General Dwight D. Eisenhower which read in part: "The total understrength of 30,327, compared to 12th Army Group's total authorized strength of 841,596, does not appear to be a critical condition to anyone who does not realize that 81.8 percent of all casualties are infantrymen, and that 70 percent of all infantry casualties are riflemen. . . . It means that the average infantry and armored division is currently approximately 78 percent of its authorized strength in infantry riflemen with no immediate prospect for improvement. . . ."

The Problem

These quotations of United States Army military leaders point up vividly the basic problem involved. In brief, they indicate that in World Wars I and II the Army failed to take corrective action to overcome satisfactorily the weaknesses and shortcomings of the world-wide replacement system.

In general, these weaknesses were: first, the lack of correlation of the activation of units, both in the Zone of Interior and overseas, with replacement requirements; second, the robbing or "slippage" of the replacement pipeline to fill nonplanned or unauthorized units which were activated overseas; third, the lack of centralized control of the replacement pipeline.

During the last year of World War II and subsequent thereto, some steps were taken to correct these deficiencies and inadequacies—for example, the establishment of the Theater Army Replacement

To overcome the many deficiencies, weaknesses, and inadequacies of our present infantry replacement system, it is believed that a combination of both an individual and unit replacement system is required

Command to control replacements within the theater. Much more remains to be accomplished, however, if we are to resolve satisfactorily this most important and challenging problem. We must reorient our thinking in replacement requirements planning if we are to maintain the combat effectiveness of our primary fighting unit —the infantry division. This problem becomes more aggravated with the battlefield employment of mass destruction weapons.

Replacement Requirements

During World War II approximately 80 percent of the total Army replacements were infantrymen. Of these, by far the majority were front-line soldiers—riflemen and weapons crewmen.

It may surprise a few of the readers to learn that, based on World War II Loss Rate Tables, it takes a replacement pipeline of approximately 56,700 front-line infantrymen to support properly the nine infantry divisions of the type field army.

This means that it takes 11 riflemen and weapons crewmen in the pipeline for every 12 men of the same category engaged in battle. You will note that these figures are based on Loss Rate Tables as they are applied to the infantry divisions of the type field army only. The type field army is composed of 9 infantry and 3 armored divisions. Any change in type organization would, of course, cause appropriate changes to be made in the above computations.

Assume that a potential enemy will utilize mass tactics and employ mass destruction weapons on the battlefield in any total war of the future. In this event, the infantry replacement requirements may well reach staggering numbers. How are we to cope with this problem? How will we maintain the combat effectiveness of our basic fighting units personnel-wise?

The ensuing paragraphs will attempt to highlight a combination of actions which, it is believed, will offer *a solution* to the problem.

Weaknesses in the System

Any analysis of the replacement problem will show that the bulk of infantry replacements must be provided by the individual replacement system. There are, however, certain basic faults and weaknesses in this system as we know it today. An analysis will also indicate that some form of unit replacement is required to supplement the individual replacement system.

In general terms, perhaps the greatest weakness in our present replacement system is that it is practically devoid of all individual consideration. It fails to get the best results from our most important and precious commodity—the ground fighting man. The most effective utilization of manpower in the Army demands that the American soldier be made to feel, as early as possible in his military life, that he is *part* of an organization. Unit *esprit*, a sense of belonging, and buddy associations are so important to combat effectiveness that minor personnel savings should receive only secondary consideration.

Another weakness or deficiency in our present replacement system is the gradual reduction of the combat efficiency of the infantry division as a fighting team. This is occasioned by two basic faults: first, new replacements have not been imbued with proper *team esprit* prior to arrival at the division; and second, no provision is made to retain the division at or near 100 percent strength because of a weakness in administrative procedures which will be discussed later.

Unit *Esprit*

All military leaders agree that a team of individuals who have trained together will fight better than a group of individuals who are assembled just prior to

entering combat. Our effort then should be concentrated on making the replacement a member of the team as early as possible. In this connection, a recent Department of the Army special regulation authorizes carrier companies and 4-man teams of infantry replacements. This is a definite step in the right direction, however, much more remains to be done.

A New System

Infantry replacements should have a *feeling of belonging* to a combat division during replacement training. One means to accomplish this would be to have each infantry division which is designated to move to an active theater, activate an infantry training unit. This unit—which would be similar to the present regiment in an infantry training division—would provide a portion (approximately 50 to 60 percent) of the infantry replacement needs for its parent division overseas. The remainder of the infantry replacement requirements—to include noncommissioned officers and specialists—would, under this concept, be furnished by infantry replacement training centers. The fact that the infantry training unit produces only a part of the over-all requirement is purposely injected for two principal reasons: first and foremost, it will afford reasonable assurance that the output of the training unit can be absorbed by the parent division each month; second, it is within the capabilities of the training unit which would be similar to a regiment within the current training division.

These training units would be attached to an infantry training division organized to administer and supervise 4 or 5 divisional training units. These units should be grouped in accordance with theater destinations. The training unit would train and make monthly shipments of replacements through replacement channels direct to its parent division overseas. It would train only those categories of infantrymen that suffer the highest casualty rate—riflemen and weapons crewmen. The training unit would be activated sufficiently in advance to permit its first increment of trained replacements to accompany the parent division overseas to replace initial combat losses.

The adoption of such a plan would alleviate one of the basic weaknesses of the individual replacement system mentioned before. It would ensure that the individual replacement receives proper unit indoctrination, and that he is imbued with a *sense of belonging* to a unit from the day he begins training. It would also offer a reasonable guarantee of prompt and careful handling through replacement channels, and would assure the division commander of a definite monthly quota of approximately 600 properly trained and unit indoctrinated personnel.

This figure of 600 is representative of approximately 50 to 60 percent of the *monthly net losses* for riflemen and weapons crewmen in the infantry division. Since these figures are based on the *long term estimate* table of losses, it should be apparent that monthly requirements for infantry replacements will fluctuate. However, in any one month the average fighting infantry divisions will most likely require all or certainly the biggest share of the 600 infantry replacements trained by the affiliated training unit.

Advantages

Significant advantages of this proposed system are that it:

1. Provides a vehicle to which "former members" could be assigned;

2. Allows for combat rotation to the United States of selected, deserving noncommissioned officers and officers (instructor personnel), thereby lending added prestige to the combat infantryman;

3. Permits the timely application of lessons learned in combat in the theater for which destined;

4. Provides a unit to which officer candidate school graduates can be assigned and later moved overseas in charge of groups of replacements;

5. Provides the parent division commander with a "tie" to the major replacement support unit in the United States.

Disadvantage

The disadvantage of this plan is its inherent lack of flexibility. However, this shortcoming can, for the most part, be overcome. In the event that occasional shipments of this personnel should exceed the requirements of its parent unit for a particular period, it may become necessary to divert part or, in exceptional cases, all of the particular shipments involved to another infantry division.

Although this practice may be considered undesirable, the proper education of personnel in the training units to this possibility would lessen the otherwise adverse impact involved. Such personnel would still have received the benefits of having trained together, shipped together as a group, and they would be slated to fight together although with a different unit than that for which trained.

The advantages of this plan far outweigh any disadvantages that can be foreseen. No significant additional manpower should be required as the training division organization proposed will merely take the place of an infantry replacement training center in the present mobilization training troop basis.

Requisitioning Time-Lag

Now let us consider an additional major deficiency in our current replacement system—the time-lag in obtaining replacements. Our requisitioning procedure precludes a front-line unit receiving a replacement for a casualty in less than 6 days—3 days of which are spent in the division replacement company for processing and combat orientation. Assuming that each rifle company committed suffers 2 percent casualties per day—a very conservative figure—at the end of 6 days it would be short 12 percent of its strength. This shortage would remain constant as long as the company is committed. Such a procedure is unrealistic as well as undesirable.

This problem could be overcome simply by authorizing each infantry division in an active theater always to have on hand a stockage of infantry replacements in the division replacement company. Based on experience figures of World War II, an infantry division in the combat zone loses an average of approximately 100 riflemen and weapons crewmen per day. These represent gross losses which must be replaced from personnel arriving through the replacement company—either new replacements or personnel returned to duty. Current doctrine prescribes that replacements should be held in the division replacement company for a period of 3 days. The division should then be provided a stockage of 300 replacements—approximately 3 days average losses to permit rapid replacement of riflemen and weapons crewmen. The proposed system would provide replacements—completely processed and immediately available to replace combat losses—and obviate the 6-day time-lag. Of course, these replacements must be charged against personnel requisitions submitted later by the division. It should be pointed out that this requirement will *not* increase the pipeline as the personnel involved are already in replacement installations of the Field Army or Theater Army Replacement Command. We cannot afford to permit an administrative procedure to slow down the flow of infantry replacements. It is believed that the separate training unit in the Zone of Interior for each division within an active theater, together with a constant overstrength in replacement riflemen and weapons crewmen, will alleviate the over-

all infantry replacement problem but that it will not solve it. As previously stated, an analysis of this problem indicates that some form of unit replacement is required to supplement the individual replacement system. Prior to discussing unit replacement, however, it should be pointed out that a critical eye should be cast on the established control agencies within the Zone of Interior for handling replacements.

At present, this control is vested in many agencies of the Department of the Army such as Chiefs of the Technical and Administrative Services; Continental Armies; Office, Chief, Army Field Forces; the Adjutant General; and G1, Department of the Army. A feasibility test of this system of controls may indicate that a centralized control agency may have to be established. This centralized agency would operate pursuant to policies announced, co-ordinated, and supervised by G1, Department of the Army.

Unit Replacement

Before discussing unit replacement, it is believed necessary to clear up three points in order that the reader will have a common understanding. First, an analysis of enemy mass attacks and the employment of mass destruction weapons indicates that complete units of at least battalion size may be destroyed or decimated. Second, although it is realized that to base combat effectiveness on strength alone is fallacious—it is assumed that a unit below 60 percent of its assigned strength has lost its combat effectiveness. Third, this discussion is limited to infantry replacements because the army and corps troops include separate artillery, engineer, and armored units which are the same or similar to those organic to the infantry division. These units are normally so located as to be immediately available for emergency temporary replacement of like units decimated by enemy action. However, the same is not true with infantry units *unless* special provision therefor is made.

There can be no question that individual replacement requires the shortest training time because no unit training is involved. It also retains the combat experience of commanders and key personnel. However, hostile employment of mass destruction weapons or mass attacks would place an extremely heavy burden upon the individual replacement system. The present replacement system will not normally contain the numbers required and certainly will not contain the noncommissioned officers and specialists needed to meet these demands. The resultant shortage will cause levies to be placed on other units. Even if these individuals were available, a unit which was assimilating the large numbers involved could hardly be considered combat effective for some time.

Unit replacement, on the other hand, will fill these heavy demands for specialists and noncommissioned officers. It will also send individuals into combat with men they know and with whom they have trained. This is a great advantage.

The formation of infantry replacement units may be considered too expensive. However, an atomic war will *require* replacement *units* and we cannot afford to overlook this requirement, regardless of cost. The only alternative would be to furnish the needed replacement unit from another trained infantry unit.

Size of Unit Involved

A further consideration is the determination of the most appropriate size unit for unit replacement. It should be readily apparent that unit replacement by *division* is not feasible. All divisions, available or to become available, will be required for combat action. Moroever, division replacement is much too expen-

sive in terms of manpower, equipment, and supporting units.

Next in size is the infantry regiment—a unit which is self-contained both administratively and tactically. The question is, can we afford it for this purpose? The infantry regiment contains comparatively large numbers of administrative and supporting personnel, and some heavy, critical items of equipment such as tanks and heavy mortars. The effect of atomic explosions on heavy equipment is relatively light. The need for many of the administrative specialists and noncommissioned officers involved is questionable. Over-all, the utilization of the infantry regiment as the replacement unit would serve to place an undue burden on the nation's material and manpower resources, and would require additional training time to prepare categories of personnel which would not be needed. The ratio of riflemen and weapons crewmen to total regimental strength is lower than it is for the infantry battalion.

The next unit in size to be considered is the infantry battalion. It is the infantry's basic tactical unit. The *organic* infantry battalion of an infantry regiment would not be profitably utilized as a replacement unit because it is not a self-contained unit administratively. However, a *separate* infantry battalion is self-contained and is provided with minimum essential administrative personnel. This unit can operate independently and—with minor modification—can be tailored quickly to become an organic part of an infantry regiment. The small quantities of personnel and equipment rendered surplus can be used profitably by units operating within the combat zone. Hence, it is not wasteful and does meet all the essential characteristics of a replacement unit. It is considered, therefore, that *the infantry battalion is the ideal size unit for this role.* Smaller units of company or platoon size are considered to be too small to effect the desired results.

Battalions Required

It is very difficult at this time to determine the number of replacement units that will be needed in any future total war. The number will be dependent upon such factors as the enemy's atomic capability, the amount of his atomic effort devoted to tactical employment, and the tactics which United States forces employ. It will be necessary to rely on intelligence agencies to provide much of the needed data. To be realistic, however, and to ensure that some replacement units are included in mobilization planning, it is believed that we should provide, as a *minimum*, one separate infantry battalion per division. In other words, a prediction of the need for one replacement unit of battalion size for each nine battalions fighting is considered valid for planning purposes.

Training and Utilization

The next question that must be answered concerns the training and utilization of separate infantry units activated as replacement units. It is only logical to assume that these units must receive combined arms training to accomplish their ultimate mission. This means that they must receive the same training as an organic infantry unit. In fact, all newly activated divisions could activate and train one additional infantry battalion to be used for this purpose. Not only would the training mission be accomplished by this action, but all such battalions would be given the distinct advantage of being associated with, and a part of, the infantry division concerned. Members of such units would wear the division patch, and would feel that they belonged to a unit rich in history and tradition. The retention of this *feeling of belonging* would prevail even though the same unit

later may be assigned to a different division should military circumstances so dictate. At least during the interim period all members of the infantry battalion would be identified with a major tactical unit. In utilizing these infantry replacement units *specific controls must be imposed* to ensure that they are available for employment for their designed purpose.

Conclusions

The foregoing discussion leads to the following conclusions:

1. The individual replacement system permits the most economical utilization of manpower and is considered appropriate for providing the *bulk* of the infantry replacement support for a field army. However, our effort should be aimed at making the replacement a member of a team from the day he starts training. A separate training unit in the Zone of Interior for each division in an active theater will materially assist in this effort. This unit should be activated sufficiently in advance to permit the first increment of trained replacements to accompany the parent division overseas as an overstrength to replace initial combat losses.

2. The infantry divisions in an active theater should be authorized a constant overstrength in replacements of approximately 300 riflemen and weapons crewmen to overcome the 6-day time-lag imposed by our present replacement requisitioning procedures.

3. The threat of enemy mass formation attacks and the employment of mass destruction weapons create a definite requirement for unit replacement, with particular emphasis on infantry unit replacement.

4. Unit replacement of decimated units is believed to be the quickest way of restoring effectiveness. It avoids peak demands on the individual replacement system for noncommissioned officers and specialists.

5. The infantry battalion is the most economical and is best suited to infantry unit replacement.

6. Separate infantry battalions activated as replacement units must receive the same training as an organic divisional infantry battalion.

7. Upon arrival in the theater, infantry replacement units must be controlled by a very high echelon—preferably the Theater Army. This is essential if they are to be available for their designed purpose.

Admittedly, there are many ramifications to the over-all replacement problem. Arguments can be prepounded against any suggested change—both equipment-wise and personnel-wise. However, it is believed that many will agree that the question of infantry replacements has never been satisfactorily solved.

We will also agree that our combat divisions must not be permitted to dwindle in strength, thereby losing their combat effectiveness. The question we must answer is not, "Can we afford changes to our present system?" but rather, "Can we afford to do without change?"

Correction—In the article *Bear Facts* which appeared in our February 1954 issue, the date in the last paragraph of the article on page 31 should have read "2 January 1951" instead of "2 January 1953."

LET US EXCEL IN WINNING WITH EASE

Lieutenant Colonel T. O. Andee, *Artillery**

The views expressed in this article are the author's and are not necessarily those of the Department of the Army or the Command and General Staff College.—The Editor.

NEED it be said that we must win our next war? With the threat of Communist aggression in many parts of the world, we must ensure that we no longer will continue to be faced with conflicts that exhaust our manpower and cost us heavily in both money and prestige. To aid us in winning our next war with facility, we must attain maximum combat effectiveness from our military units. In order to further our combat effectiveness, let us reorganize our infantry divisions and our corps headquarters.

About 500 B. C., Sun Tzu, the famous Chinese military historian said, "What the ancients called a clever fighter is one who not only wins but excels in winning with ease." Throughout history soldiers have bent their efforts toward an organization which will assist in winning with ease. It certainly behooves us to survey our organizations to determine if changes may enable us to win any future war with greater ease than we have won our past wars.

The Greek Phalanx and the Roman Legion were organizations well suited to their time. Such organizations would be easy prey for our modern fire power, even without the power of atomic weapons. Recent weapons developments require that increased emphasis be placed on our so organizing that we can obtain greater flexibility within our combat units.

Many of the early military historians devoted considerable space to the discussion of military organization, and the successful early military leaders organized their units to facilitate the accomplishment of their mission. Vegetius—in his military writing in the period near the fall of the Roman Empire—discussed at great length the importance of the proper organization of the Legion. Marshal Maurice de Saxe—in the early eighteenth century—began the modern organization from which the present combat division developed. He insisted on organizing to attain maximum flexibility. Frederick the Great based his superb tactics on superior mobility. He organized his combat units so that they were always mobile.

The German *blitzkriegs* in Poland and later in France and Belgium, in the early period of World War II, were made possible by the use of superior mobility and well co-ordinated fire power. General George S. Patton aptly described this combination when he said, "Hold him by the nose with fire, and kick him in the pants with movement." We must improve our organization to enable us to make the best possible use of the mobility and fire power available to our present-day combat units.

In division-level planning—when placing units in combat positions—the infan-

* The author of this article, an artilleryman, prefers to use a pen name.

try battalion normally is considered the basic unit and battalion position areas or zones are selected. In other words, the infantry battalion is really our basic combat organization in either the offense or the defense.

The battalion, with its triangular organization, can be adapted readily to the available terrain and to organization in appreciable depth. We should consider this when the question of reorganizing the infantry division is being discussed.

In our present infantry regimental organization, supporting weapons within a regiment are integrated into the fire support plan for an attack only when the regiment is employed as a unit with some of its elements in direct contact with the enemy. This often results in a failure to utilize all possible fire power when such power is needed to penetrate an enemy battle position. Frequently—to make all possible fire power available—all three regiments may be committed in the initial assault with one regiment being pinched out early in order to serve as a strong reserve. This is obviously often a needless waste of infantry manpower.

During World War II, our armored divisions were so organized as to obtain great combat flexibility. It was possible for the division commander of an armored division to increase the combat power of one of his subordinate commands by merely attaching infantry or tank battalions as needed. If a combat command required 3 infantry battalions and 1 tank battalion, and another command required 1 infantry battalion and 1 tank battalion in order to accomplish the division mission, such organization was accepted without question. No subordinate commander considered that his organization was broken apart or robbed by the strengthening of a particular command. The armored division organization has shown how flexibility in a divisional organization may be obtained.

There is a certain similarity between the present and the period shortly before 1940, when some of our able and far-sighted Army officers realized that the square division would not be the best organization for ensuring success in the next war. Study and tests developed the triangular infantry division of World War II, which proved its organizational soundness in combat. However, in view of weapons developments and techniques now available to us, we must re-evaluate our present combat units to see if we again need a reorganization to improve mobility and combat power.

Infantry Division Reorganization

To ensure maximum utilization of the flexibility and fire power available, let us now consider the headquarters and units desired for the reorganization of the infantry division. The basic component parts recommended for this proposed division are: division headquarters, division troops, three combat command headquarters, separate battalions and companies as required—the division remaining at approximately its present strength until tests have determined any necessary changes in composition. To determine the proper balance of combat units comprising this infantry division, it is recommended that field tests be conducted using 9 infantry battalions, 7 artillery battalions (3 light, and 2 medium field artillery battalions, and 2 antiaircraft automatic weapons battalions), 2 medium tank battalions, and 1

To become clever fighters who not only win, but excel in winning with ease, we must attain maximum combat effectiveness from military units and reorganize our infantry divisions and our corps headquarters

combat engineer battalion. The tank company and the heavy mortar company in each infantry regiment should be eliminated. The addition of a tank battalion and a medium artillery battalion will compensate for the fire power lost by the elimination of these companies. This change will add to the division commander's ability to mass power where needed. Approximately the same service support now provided for the infantry division will be needed. Hence, there should be no appreciable increase in service personnel.

The combat units must be so trained that they can function under any combat command or in any possible task force combination. Units may be attached to a headquarters, may be placed in a support role, or may be given a reinforcing role. The requirements of the over-all combat mission will invariably dictate the troop requirements and the missions given to subordinate units.

Fire Support Co-ordination

In addition to reorganizing combat units within the division to obtain greater combat flexibility, we must organize our staffs so that we can get the best possible fire support co-ordination. The present infantry division organization does not assist in the easy solution of the fire support co-ordination problem.

King of Battle

All the component parts of a combat organization must always have been directed toward proper balance and control to ensure that each separate part was so employed that maximum effectiveness was attained. Early history has told us of supporting fires delivered by archers and javelin throwers. Even with such crude fire support, it was necessary to so plan and organize that the fires would be delivered when and where needed. Early in the seventeenth century—as artillery began to come into general use—many of the military experts stated that no other combat branch would be needed in any future war. In fact, for a time, planning and support were centralized around artillery—the king of battle. As we all know, "the king" was unable to rule the battlefield without considerable assistance from other arms. Great leaders generally have recognized that balanced forces are required to win wars as was evidenced by this maxim of Napoleon: "Infantry, cavalry, and artillery cannot do without one another." We have found that artillery alone is insufficient to conquer a determined enemy, just as history has taught us that no one arm alone can win.

Napoleon was severely criticized for the large increases that he made in his artillery. He had properly evaluated, and wished to avoid the terrific casualties caused by massed infantry and cavalry charges. To enable his infantry and cavalry to close with the enemy with small losses, he massed artillery pieces so that he could weaken the enemy lines at a particular point prior to the launching of his assault. Our improved artillery fire direction methods, developed prior to and during World War II, have given us the means of massing artillery fires without the necessity of assembling large numbers of guns.

Shortly before our country entered World War I—while our Army was chasing Pancho Villa near the Mexican border—one of our senior commanders stated that the artillery must be emplaced where it could see the enemy. He would allow none of the "new fangled" indirect fire in that engagement. Our indirect artillery fire has been developed rapidly since that time. In the space of approximately 25 years, our artillery fire direction has progressed from direct laying on the target by each gun, to the massing of many battalions of different calibers in a time-over-target concentration on our enemy, a practice which became quite common dur-

ing World War II. This increase in effectiveness of field artillery fire was made possible by constant improvement of organization and matériel.

The Problem

We must seek similar facilities for massing and co-ordinating all our fire support that we now have only for artillery. Primary difficulties of fire co-ordination are due to the fact that our fire support means have increased so appreciably in the past decade. For example, our infantry support weapons have been expanded—we have additional artillery, air support has been increased, we expect naval fire support under proper conditions, and we have recently developed weapons of power little dreamed of in the past.

We frequently have considerable physical separation between our fire support co-ordination center, and our operations or G3 section, and our intelligence or G2 section, within a particular headquarters. Also, there is a separate individual directing each of these activities. Physical separation of sections, and different directors of these closely related activities, increase the difficulties of planning and achieving complete fire support co-ordination and other operational actions on intelligence.

We must ensure that we have the best possible physical and organizational arrangement to co-ordinate the use of our fire support, and to act quickly on intelligence.

The tactical use of atomic weapons and the increased emphasis on all types of fire support require that we consider a reorganization of the various staffs that are directly responsible for the administration, intelligence, operations, and supply of our combat units.

Each staff—from corps headquarters through the combat battalion headquarters—must be so organized that fire support co-ordination can be expedited to the maximum. In addition, that part of any staff most directly concerned with combat operations in general, must be completely integrated, kept small in numbers, and so organized that it will attain maximum efficiency.

Two-Section Headquarters

These objectives can be achieved by dividing division headquarters into an operations section and an administrative section, with these two sections operating under the direction of a chief of staff. In combat, the operations section normally will be the division forward echelon of the command post, with the administrative section located at division rear. All the planning, operational, intelligence, supervisory, and support functions of the division headquarters will be centralized within these two staff sections. By proper organization of these sections, we can have maximum flexibility and continuous support—to include fire support co-ordination.

Organization

The operations section of the division headquarters would have to be so organized that it could do the staff intelligence work with the operational planning, prepare the required operations orders, and handle the entire fire support co-ordination function. With intelligence, operations, and fire support personnel all working and living together, our ability to react quickly to any enemy action should be increased. Personnel from the present G2 and G3 sections would provide the nucleus for the operations section, augmented as necessary by fire support and other essential personnel. This organization would eliminate the division artillery commander with his headquarters and headquarters battery.

The administrative section would be composed largely of personnel in the present G1 and G4 sections, plus special staff personnel as required in order to provide complete logistical planning, preparation

of orders and directives, and technical and administrative support for the entire division.

This organization of the division headquarters will not hinder, and may even facilitate, the dispersal of the various echelons of the division headquarters and division troops. Such dispersal will not be at the expense of combat operations of the division, however, since our intelligence, operations, and fire support functions will be centralized in one section.

Combat Command Organization

To follow this command organization one step further, each of the three combat command headquarters would be organized similarly to the division headquarters, with an operations section and a small administrative section. This latter section can be small since this headquarters need have few logistical functions.

Each combat command should be commanded by a brigadier general, with the senior commander designated and oriented so that he can assume command of the division in case the division commander becomes a casualty. With each combat command headquarters organized similarly to the division headquarters, the senior combat command commander can take operational command of the division readily in case of the loss of the division commander and his operations section. The operations section should be organized with intelligence, operations, planning, and fire support co-ordination functions within its section.

This suggested organization, with its inherent command flexibility and its fire support co-ordination component within each combat command echelon, will facilitate the division commander's ability to organize so that he can take advantage of the terrain and the enemy dispositions, utilizing the desired troop units under a single commander. It is entirely possible with this organization, to weight a command with any one of the combat arms and use that command in any role that the commander desires. Our present regimental organization makes it very difficult to attach a unit of one regiment to another regiment—even though certain tactical situations may require such flexibility. In fact, regimental commanders bitterly resent any loss of control over any of their units.

Corps Organization

The organization of tactical headquarters into operations and administrative sections must be carried one step further if we are to gain full benefit from this reorganization of headquarters. The corps headquarters should be reorganized to place operations, intelligence, tactical planning, and fire support co-ordination functions within a single section. This operations section should comprise the forward echelon of the corps command post in combat, and should be as small as practicable in order to make its displacement easier. Similarly, an administrative section should be organized carefully in order to keep its personnel strength small in accordance with the established policy that administrative and supply functions of the corps must be kept to a minimum. In combat, the administrative section, normally, will comprise the rear echelon of the corps command post. Staff supervision of the operations of corps troops generally will need to be placed in the operations section of corps headquarters. The only change in the present composition of corps troops contemplated as a result of this suggested reorganization is the inactivation of the corps artillery headquarters and headquarters battery.

These suggested changes in the organization of divisions and corps require no organizational changes at field army level or above. Changes to be made merely for the sake of change must be discouraged.

Conclusion

These organizational changes that have been discussed will give us additional flexibility and much more efficient fire support co-ordination within our combat corps. We can integrate our plans, operations, intelligence, and fire support coordination in a single section in those command echelons where such integration is vital. We also should be able to effect personnel savings by such a simplification of organization. Further, limited personnel savings may be effected by eliminating corps artillery and division artillery headquarters and headquarters batteries with their presently required personnel, facilities, and communications. At division level these savings will be offset somewhat by the requirement for fire support coordination personnel and related communications in the combat command headquarters.

With the combat command organization outlined herein, it will be possible to take any units, not immediately engaged with the enemy, to exploit any success in an attack. For example, Combat Command A may have broken through the enemy resistance without having committed its attached infantry and tank battalions. The division commander certainly will desire to exploit this success with the maximum force; so he may take these two battalions from Combat Command A and attach them to his reserve command—Combat Command C. He may reallocate, also, his artillery support to provide the maximum to Combat Command C and take from Combat Command B any units not engaged. This is entirely practicable because all units are accustomed to working with any command. Further, reserves may well be reconstituted from units pinched out and placed under any of the combat commands. As you can see from this example, the flexibility of an infantry division organized in this manner is unlimited.

In a defensive situation, organizational flexibility is just as vital as in the offensive for the reason that such flexibility will enable each command to take maximum advantage of the terrain. For example, a particular terrain compartment may require 4 infantry battalions to organize it properly for defense. With the combat command type organization, the 4 battalions may easily be placed under a single command. However, with the regimental type organization, maximum efficiency seldom will be reached when a battalion of one regiment is attached to another regiment.

These reorganizations, recommended in this article, are aimed at improving combat flexibility and fire support in our corps and our infantry divisions at no cost in additional personnel.

This is a plea to compare the combat efficiency of our present organizations with the efficiency we may attain with the changes outlined herein. Manifestly, this article could not present in detail all aspects or factors involved in the reorganizations discussed. If these changes seem valid to you, give them your serious consideration so that we can become clever fighters—who not only win but excel in winning with ease.

Correction—In the article *Economy of Means* which appeared in our February 1954 issue, the figure on line eight of the right-hand column on page five should read: ".47 percent" instead of "47 percent."

FORT LEAVENWORTH GROWS UP

Colonel George C. Reinhardt, *Corps of Engineers*
The Engineer Center, Fort Belvoir, Virginia

This is a continuation of Fort Leavenworth is Born *which appeared in the October 1953 issue of the* MILITARY REVIEW.

The views expressed in this article are the author's and are not necessarily those of the Department of the Army or the Command and General Staff College.—The Editor.

FORT Leavenworth's early mission, "Protection of caravans on the Santa Fe Trail," materially influenced the rebirth of the United States Army's cavalry arm. The Fort was almost 6 years old when Congress on 2 March 1833 authorized a "regiment of dragoons recruited from native citizens well qualified from previous habits for mounted service." It was another year before the first trooper of that regiment rode into the Missouri River citadel, which he described in his diary as "a fort by courtesy or rather by order; in reality a straggling cantonment but on an admirable site."

The Fort's founder and first commandant, Colonel Henry Leavenworth, perhaps the most experienced wilderness campaigner then in the Army, had already employed irregular mounted rangers to scout against Indians on horses.

Regular infantry's disciplined fire power was ample to protect the slow moving caravans placed in their charge. Nor did oxen-paced transport tax the capacity of foot soldiers to match a caravan's "speed." (Fifteen years later in the Mexican War 6 miles a day was an acceptable rate of progress for a contractor's supply train.)

Yet the novel experience of combating well-mounted, fast-riding Indians on the rolling plains demanded swift, distant reconnaissance beyond the foot soldier's capability. There, the ranger served admirably. For pursuing and punishing raiding bands of hostiles, they were too few and undisciplined. The setup was near perfect for the Indians. They could safely hover around the infantry column just beyond effective rifle range, circle the column at will, strike unwary outposts, and retire without fear of pursuit. Fort Leavenworth's mission demanded regular cavalry.

Doubtless, the recommendations of a distant garrison's colonel-commandant would have gone much longer unanswered had it not been for the outbreak of the so-called Black Hawk campaign in 1832. There, some 3,000 mounted militia were called into service "due to the smallness of the Regular force on the upper Missouri."

These operations "cost a sum that would support the regiment of dragoons for 10 years" and doubtless influenced the congressional action of the following March.

The curious story of how the first cavalry troops reached Fort Leavenworth may be more colorfully learned from the writings of Lieutenant Philip St. George Cooke than by thumbing official files. (Cooke lived to become a Union cavalry general in the Civil War and suffer defeat at the hands of his son-in-law, a Confederate general named J. E. B. Stuart.)

Coffee Converted Doughboy

Appointed one of the officers of the new 1st United States Dragoons (direct lineal forebear of the 1st United States

Cavalry) Lieutenant Cooke found himself, like his messmates, assigned the duty of recruiting their own units.

He was a veteran of Fort Leavenworth and knew well its commandant, thanks to service with the relieving columns of the 6th Infantry which took over the Post from the disease ridden 3d Infantry garrison in May 1829.

On that occasion, Colonel Leavenworth had, within hours of its arrival, marched the 6th Infantry 50 miles to a rendezvous with traders en route to Sante Fe.

These gentry were accompanied as far as the Arkansas River, then the United States boundary according to Cooke, where they halted in a long wait for the Mexican convoy. Spirited, if desultory, Indian fighting punctuated the burning hot summer months. In that uncomfortable campaign, Cooke began his experience as a mounted fighter by oddest accident.

He spilled coffee into his boot from a pewter mug ("notorious among apothecaries and field soldiers for keeping liquid unconscionably hot").

Incapacitated by resulting blisters, the lieutenant was "allowed to enter combat on a horse," an experience which convinced Cooke he had discovered a superior mode of fighting.

The Army then possessed no cavalry arm so Cooke temporarily found other paths to adventure. After a winter at Fort Leavenworth, he won permission to make an extended trip up river with an "officer of the Indian Department" (headquartered at Fort Leavenworth since the Great Migration of 1830) to the "villages of the Otoe and Omaha Indians and the old Council Bluff." That was 1831. The season was early June. Ignorance of weather and seasonal significance nearly cost the travelers their lives. Unwisely pitching camp on a low knoll in a wide expanse of bottom-land during heavy rains, they woke in the darkness to find the place submerged by swiftly rising flood waters.

A year later, still restless, Cooke escaped from Fort Leavenworth permanently (so he thought) through the medium of volunteering for service under Brigadier General Henry Atkinson in the Black Hawk fracas. His appointment to the Dragoons followed.

Now (1833) an enthusiastic cavalryman, he gloats in the Indian term for his branch, "Long Knives," and studied Swiss books on mounted tactics. No remote idea of returning to the Missouri River Post remained in his mind. Not yet cavalryman enough to say "troop," Cooke reports: "Five companies of Dragoons were soon concentrated at Jefferson Barracks, busily forming a new corps where the amount of duty, responsibility, and instruction is doubled compared to infantry." Perhaps enlistments were speeded by the War Department's promise to recruits that they would be "well clothed, equipped, and kept in comfortable quarters in winter."

An Imbecile Administration

Nevertheless, "before any clothing or proper arms were received; before two companies had their horses; at that season (20 November) when all civilized and, I believe, all barbarous nations at a state of war suspend hostilities," the five companies were sent post haste to Fort Gibson on the Arkansas.

The "other five companies joined in June (1834) and were hurried off, like

The novel experience of combating well-mounted, fast-riding Indians on the rolling plains of Kansas demanded swift, distant reconnaissance and greatly influenced the rebirth of the United States Army Cavalry

all the rest quite unprepared for an expedition," under climatic conditions which caused the choleric Cooke to record: "Nature conspired with an imbecile military administration for the destruction of the regiment." As many as three-fourths of the command, horse and man, were stricken by illness. Capture of the sick camp by Comanche Indians was barely averted by the boldness of its commander, J. F. Izard, formerly adjutant of the 6th Infantry, destined to die in the Florida War.

By this indirect procedure, the Dragoons became a part of Fort Leavenworth's far-flung (in summer) troops. "General Leavenworth and his aid [*aide*] stopped. They both lost their lives," is the sole, terse entry describing Henry Leavenworth's illness and death, inaccurately inferring that star rank had actually been received before he died. The expedition almost broke down from the ravages of disease, but "Colonel Dodge with 150 of the hardiest" pushed on to the Comanche villages "perhaps within the boundary of Mexico." According to Cooke, "breath was wasted in unavailing effort to mediate peace" on the plains but at least Dodge secured the release of three white prisoners held by the Indians. This was without fighting.

In September, the three squadrons marched to three distant posts to "find some leisure, invent and practice as many different systems of cavalry tactics." Thus, Lieutenant Philip St. George Cooke returned to Leavenworth with his squadron of the Dragoons, bitterly protesting orders which split his beloved regiment. "Consequently," he wrote, "cavalry tactics, ignored in the United States Army for two decades, will be diversely reviewed by three unrelated commanders."

Beyond poetic passages devoted to the natural beauties abounding (doubtless not exaggerated in comparison with a desert summer in the southwest) Cooke ignored his Post in his commentaries. Yet the garrison to which he returned, continued behind its stone wall existence as hectic as on field expeditions.

Indigenous Supplies—1837

To the military at the Fort had fallen the unpopular task of protecting the peaceful Indians on their western Missouri reservation. White men with arms in their hands took up illegal homesteads in the rich farming country. Upon War Department orders, settlers of what is now Platte County, Missouri, were evicted by the troops and saw their log homes burned. This 1836 "deed of violence" goaded Missouri's Senator Benton to forensic eloquence in the Senate. "Aggression" was not so universally condemned in those days.

The Senator forced the passage of the Platte Purchase act despite anti-slavery opposition, which at that early date already resented a major addition to a slave state.

Missouri, a state since 1821, gained in territory and received an influx of settlers with the negotiation, at Fort Leavenworth in 1836, of the Platte Purchase Treaty. In return for a payment of $7,500, expensive only when compared to the original cost of Manhattan Island, the northwest corner of the state, west of a line running due north from the junction of the Kaw and Missouri Rivers, was vacated by Sac, Fox, and Iowa tribes in 1837. Payment was less than $1,000 cash, the balance in livestock and farming equipment.

Settlers poured into the newly opened

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land. A brisk trade with the Fort sprang up. "Relations with the civil populace" notably improved. Prior to 1837 "a rough wagon road from Liberty, Missouri to Fort Leavenworth" (the Birdsall Road built under Henry Leavenworth's early order) was the main supply route for the river cantonment and its Indian agency. River navigation had fallen into partial disrepute since its earlier exploitation by the fur traders, perhaps because pay loads were now so much less valuable a pound and had to be transported up, not down, stream. The lumbering steamboats that earned fabulous profits on the Mississippi and Ohio could not, when heavily loaded, maintain headway against the swift Missouri current. In addition, the latter's rapidly shifting sand bars studded with snags (huge trees washed downstream and lodged in the mud just below the water surface) were deadly to flat wooden hulls.

Consequently, the logistic benefits of indigenous materials were sought to reduce the strain on harried supply services, then as now. Nevertheless, the acquisition of white near-neighbors was viewed with mixed emotions by the Fort authorities. Food became easy, and less costly, to acquire. Enterprising settlers were soon disposing of "50-pound catfish" in the cantonment. They were also setting up, beyond even the feeble control of state authority, facilities along the west bank deemed unwholesome for United States soldiers. That problem was solved by government purchase of "Kansas Landing," expanding the size of the reservation and forcing the "traders" back to the east bank.

For a decade, Fort Leavenworth's mission and appearance remained little changed. Trade to and from Santa Fe increased. Construction was crude and limited by the protracted absence in the field of the bulk of the troops.

Early in 1846 the noted historian, Francis Parkman, visited Fort Leavenworth and described its defenses as "two blockhouses in the wilderness with no rumors of war disturbing its tranquility." Within the year that tranquility received a rude shock.

The cantonment expanded to become the principal western base for operations in the war against Mexico and headquarters of the newly created (principally by act of Congress) "Army of the West." Three main contingents were organized at, and departed from, the Fort:

1. General Stephen W. Kearney's division, designated "main body," marched on Santa Fe with the conquest (they called it "liberation" in those days, also) of California as its ultimate objective.

2. Colonel Alexander Doniphan followed Kearney to his chief's initial objective, then drove on into Chihuahua.

3. Colonel Sterling Price, who would one day vainly try to plant Confederate battle flags at Leavenworth, led the largest division, all volunteers. These brought up the rear as an occupation force for Santa Fe.

So read the official records, but in stern fact the entire Army of the West was volunteers save for the small force of Dragoons split between Kearney and Doniphan. The bulk of the men came from the State of Missouri.

Kearney made the 900 miles to Santa Fe in exactly 50 days after leaving the banks of the Missouri on 26 June. Doniphan, slower, was apparently saving his breath for a march that would rival Xenophon's. Departing from Santa Fe in November, he swept through the Navajo country in triumph, invaded the state of Chihuahua, fought and won two pitched battles, and shipped his force, their enlistments running out (ever the bane of United States military commanders), home by sea from Matamoras. He had marched nearly 2,000 miles, over four-fifths of it in enemy country.

Incidentally, the return of Doniphan's

troops introduced an epidemic of cholera, picked up in Mexico, to the Leavenworth Cantonment. Several years' vigorous work by the surgeons were needed to eradicate the disease.

The Fort covered itself with glory as an active campaign base. A few records illuminate the logistic difficulties and procedures. Supply trains, normally contractors' caravans, were required to make 6 miles a day in support of the field forces or lose payment for their services.

Government clothing issues were so inadequate, and unsuitable for active service on the plains, that after the first weeks the appearance of all troops was indistinguishable from that of hunters and trappers. Wearing apparel of Indian manufacture became the rule rather than the exception.

The informality of logistic procedures is startling compared to current supply codes. When Colonel Wharton, Leavenworth quartermaster, refused supplies to which Major Gilpin's battalion of volunteers felt themselves entitled, the blunt major challenged Wharton to take off his eagles and fight a duel.

The incident ended with quill pens instead of pistols, however, and the battalion left on schedule—with its wagon train filled.

Shortly after the close of hostilities, the Post settled back, somewhat larger and definitely better known than before, to convoy duty, now bereaved of the festivities which had formerly accompanied meetings with the Mexican escort. The bistros and entertainment houses of Santa Fe probably made a satisfactory substitute.

Trips were briefer despite the greater mileage as cavalry was employed and traders used mules instead of oxen. Into this scene a new recruit for the Dragoons, Percival G. Lowe, came after a march and river boat trip from his native New England.

Bedlam

Lowe's uninhibited accounts prove how tremendously army life impressed the New England farm boy who had never seen such rugged characters as his comrades. He puzzled long over the paradox of their disciplined duty behavior, their enthusiastic conduct in leisure hours. The Soldiers' Ball he mentions, unfortunately without description, transcends imagination. Yet, the same men decorously attended and applauded the officers' "Thespian Society" performances staged during the long winters. Other Lowe-isms explain why bachelor officers' quarters (site of the present Army National Bank), adjoining the barracks of that day, were dubbed "Bedlam" by the troops. Had Lowe been an artist, it would be amusing to compare his sketches with Mauldin's *Willie and Joe*.

The decade of the fifties witnessed Fort Leavenworth's expansion on a scale magnificient for the period. Concurrently, the city of Leavenworth was growing even more swiftly. In 1853, Fort Riley was established 150 miles to the west, inaugurating an era of road construction and settlement of Kansas territory. Railroads, pushing westward, stopped temporarily at the Missouri River, opposite Leavenworth. Still more serious problems, however, were looming. One, John Pottawatomie Brown, had come to the Territory. Pro- and anti-slavery men feuded fiercely. Murder and arson were commonplace in "bleeding Kansas."

Bayard's Foresight

Lieutenant George D. Bayard, West Point graduate class of 1856, on duty at Fort Leavenworth, displayed, in letters home, remarkable foresight as he praised his profession's part in the tragedy.

"The Army is the scapegoat throughout this whole embroglio though neither party has any just complaint. Officers obey orders and keep people from murdering and violence."

Decidedly, he believed that only the presence of the military "prevented the outbreak of a civil war which might embroil the whole nation" and in which Bayard would die at the head of his brigade on the heights of Fredericksburg.

Reflective historians might wonder how our history would read today had there been a sufficient Army to make its influence for peace felt, not merely on a distant border post, but throughout the nation in those critical days.

In 1854, Kansas' first territorial governor, Andrew Reeder, coming up the river by steamboat, was warned that slavery adherents promised to lynch him in Leavenworth City. The danger must have been exaggerated in view of that locality's strong Free State sentiments, but the new magistrate conservatively ordered the steamer's captain to stand out in the channel and continue upstream to the Fort. There, protected by Federal bayonets, he ensconced himself at Pope Hall (today's stone structure) which became Kansas' first statehouse.

The Governor was quickly "liberated" from his military protection in rather unorthodox manner. An enraged anti-slavery mob took over Leavenworth town, driving the pro-slavery adherents across the river into Missouri.

Dragoons Rescue Generals

Two distant expeditions issuing from Fort Leavenworth in that decade moved out smartly enough but failed to achieve the brilliant records of their Mexican-wartime predecessors. One, against the Cheyennes in 1857 (Nebraska and western Kansas), outdistanced its supplies (a polite way of saying the Fort's logistic support fell on its face) and eked out a precarious existence, living off the country by hunting, surviving the weather in makeshift attire bartered or stolen from the Cheyennes.

The other, a more pretentious affair comprising four regiments under General Harney, was directed against the Mormons in Utah beyond the passes of the Rockies. Once again logistic failures threatened disaster. The expedition's supply train was ambushed by enterprising Mormons who preferred interdiction to combat. General Albert Sidney Johnston (later to die at Shiloh), following with a small escort of Dragoons, found the main body in bad shape, utterly incapable of tactical operations.

The ubiquitous Cooke, whose career so often lead him to Leavenworth, now Colonel of Dragoons, marched his full force 1,000 miles in remarkable time to relieve the two embarrassed and by now rather antagonistic generals. Wisely, the Mormons thereupon came to terms while the Army was still far from their homeland and the discomfited expedition returned to base.

By 1855, the Oregon Trail was a well traveled, if tenuous, highway for easterners in search of new homes, wholly different characters from the adventurous traders or gold seekers. All these diverse elements met at Fort Leavenworth where both the Oregon and the Santa Fe Trails crossed the Missouri to separate only a few miles further westward at the beginning of the plains.

Lone travelers, partnership groups, entire families carrying their worldly possessions, mules, horses, cattle, wagons, all crowded in and around the Fort awaiting formation of convoys. Escort duty multiplied. More troops arrived. This was a period of "major construction" on the Post now some 25 years old.

An incident, little noted at the time, may have materially affected the Fort's future.

In 1858, Mr. William Tecumseh Sherman opened a law office in the city of Leavenworth, and formed many close associations with the Fort's garrison. In 1881, it was the same man, General W. T. Sherman, who, as commander in chief of the Army, ordered that the first graduate school for

officers be established at that Post, thus giving substance to the dream of its founder.

The guns of Sumter were heeded by General William S. Harney, commanding Fort Leavenworth, who recognized the national importance of retaining the Post for the Union. All outlying garrisons and expeditions were hastily called in. None too soon. Southern sympathizers seized the arsenal at Liberty, Missouri. Thus armed, their superior numbers presented a serious threat. The population of Leavenworth City raised a battalion to assist the Fort's defense, but no attack materialized.

Influential Friends

Defeat at Bull Run temporarily demoralized General Winfield Scott at the War Department into ordering evacuation of all Territories by Federal troops. This meant abandoning Fort Leavenworth. Harney's protest was disregarded but Alexander Caldwell of Leavenworth City who held part of the contract transporting supplies to and from the Fort "enlisted the aid of influential friends in having the order revoked by the Secretary of War." Political-economic pressures overruled military considerations with, as events proved, indisputable wisdom.

The Fort's role in the Civil War dwindled after its initial contribution in saving the (then) northwest border for the Union. "Camp Lincoln," within the reservation, received battalions of "Lincoln volunteers" for 4 years totaling, in the vague phrase of official record, "many troops." Mustered in, crudely trained, suffering casualties from epidemic diseases the decimated units eventually departed for active service, neither better nor worse than the national average for "training centers" of that period.

Only once in the long struggle was Fort Leavenworth's safety in serious danger. That was Price's raid into Missouri in October 1864.

The Confederate commander, General Zebulon Price, the same whose Mexican War volunteer force departed for active service from the Missouri River Fort, penetrated as far as the present site of Kansas City, Missouri. There he was defeated in the Battle of Westport Landing —somewhat grandiloquently termed the Gettysburg of the West.

General Curtis, then commanding at Fort Leavenworth, had not waited at the Fort to be attacked but lead his men southeast to meet the approaching foe. General Alfred Pleasanton's troops fortuitously came upon the battlefield in time to markedly influence the result—according to Pleasanton, for all that Curtis' reports cast a rather different light upon the victory.

Sixteen years between the Civil War's end and the founding of the "School of Application" were utterly without excitement at Fort Leavenworth. More distant posts had taken up the burden of Indian fighting. The construction completed in the fifties was ample for the small garrison.

Oddly enough, the last of the few shots fired in anger at the historic Post blazed out in the quarters of the commanding general, traditional "Number 1 Scott," late one summer evening in 1909.

The Commandant, Brigadier General Frederick Funston—famed as the captor of Aguinaldo in the Philippine Insurrection—was awakened by a shot. His family was away and no servant lived on the upper floors.

The General's soldier instinct warned him the fire had come from close by and a sharp blow on the mattress was proof it had been directed at him. Drawing a pistol from under his pillow, the General rose up in bed as a man's form moved indistinctly in the dark, toward the door and the stairs to the first floor. The General fired several times but failed to stop the intruder. In a matter of moments, the guard rushed in, the Post was alerted; but whoever had at-

tempted the Commandant's life, was never apprehended.

Investigation discovered a bullet hole through the mattress a few inches from the spot occupied by the General. The spent bullet lay buried in the floor beneath the bed. Conjecture in *The Chicago Tribune* connected the assault with an incident some 5 years before while General Funston was on duty in San Francisco and prosecuted a soldier for association with anarchists. Threats against the General's life had been made but quickly forgotten by the veteran campaigner.

The mystery remained unsolved, but the "shooting affray" in the Commandant's quarters created a major stir in the peaceful regime of the Fort and was written up in the Sunday papers with "artist's concept" drawings.

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THE HOOVER COMMISSION AND THE ARMY

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The views expressed in this article are the author's and are not necessarily those of the Department of the Army or the Command and General Staff College.—The Editor.

HERBERT Hoover, statesman, patriot, and former President of the United States, once again has been called upon to lend his abilities to the service of his country. For the second time in his distinguished career, Mr. Hoover has been asked to review the workings of the Executive Branch of the Federal Government and submit recommendations on ways and means to improve its organizational structure and complex functioning.

This is a familiar field for Mr. Hoover for in 1949, as Chairman of the Commission on Organization of the Executive Branch of the Government, he submitted an organizational blueprint to the Eighty-first Congress which has had a historic effect on many federal activities—including the United States Armed Forces.

It is common knowledge that major changes have been made in the Department of Defense since 1949. It is probably not as well known that the majority of these changes stemmed from recommendations made by Mr. Hoover's committee. In the major fields of fiscal management, interior management, personnel management, and organization for control, the impact of the Hoover Commission's recommendations has been considerable. In other areas, such as medical affairs, overseas administration, and nonmilitary functions of the Army, the impact has been felt to a lesser degree.

What are the implications in this new study being undertaken under the guidance of Mr. Hoover insofar as the Army is concerned? Perhaps a clue to the answer may be found in reviewing some of the original Hoover Commission recommendations in regard to the matters mentioned above.

How It Started

The Commission on Organization of the Executive Branch of the Government—commonly referred to as the Hoover Commission—was activated by Public Law 162, Eightieth Congress, for the purpose of submitting recommendations to achieve the stated policy of the Congress "to promote economy, efficiency, and improved service in the transaction of the public business of departments, bureaus, agencies, boards, commissions, offices, independent establishments, and instrumentalities of the Executive Branch of the Government."

As the result of its investigations, the Hoover Commission submitted 18 major reports and a concluding summary to the President of the Senate and the Speaker of the House of Representatives, Eighty-first Congress. A total of 281 recommendations for reorganizing the Executive Branch of the Government were contained in these reports. It should be noted that

the 281 recommendations were not reported unanimously by the commission and many were accompanied by dissenting reports. This situation was caused in large part by the fact that the commission was bipartisan in membership—as prescribed by the authorizing statute. Also, many of the fields surveyed involved highly controversial subjects on which unanimity of opinion would be virtually impossible to obtain.

National Security Organization

Several of the reports submitted contained recommendations that reacted—either directly or indirectly—on the National Military Establishment. However, of primary importance to the military side of our government was the study prepared for the commission's consideration on the National Security Organization in the Federal Government. Actual work was done by a task force headed by Ferdinand Eberstadt, a distinguished authority on matters of national defense. This study was subsequently published as House Document Number 86, Eighty-first Congress (first session). The six recommendations contained in the study, plus an additional recommendation submitted separately as a minority report, have had a profound influence on the organization and internal operations of our Army. These recommendations are the ones which will be considered herein.

In the major fields of fiscal, interior, personnel management, and organization for control, the recommendations of the Hoover Commission have left a lasting impression on the nation's military affairs

The National Military Establishment—as legislated in 1947, to establish unification of the armed forces—left much to be desired. Interservice rivalries indicated a lack of understanding of the fact that military security depends upon co-operation and upon the creation of a genuinely unified military arm. The authority of the Secretary of Defense—under the National Security Act of 1947—was weak and heavily restricted by provisions which established a rigid structure of federation rather than unification. The Secretary had only general authority over the three service departments.

From their comprehensive studies of the situation, as it then existed, the commission concluded that the 1947 National Security Organization had serious organizational defects and that, "The lack of central authority in the direction of the National Military Establishment, the rigid statutory structure established under the act, and divided responsibility, have resulted in a failure to assert clear civilian control over the Armed Forces." This conclusion formed the basis for the commission's recommendations to Congress on national military affairs.

Recommendation Number 1

With a view to standardizing budgetary and accounting procedures within the military departments, the commission recommended:

1. That full power over preparation of the budget and over expenditures as authorized by the Congress be vested in the Secretary of Defense, under the authority of the President.

2. That the Secretary of Defense direct and supervise a major overhaul of the entire budget system; that the budget be of a performance type with emphasis on the objectives and purposes to be accomplished, rather than upon personnel, supplies, and similar classification; that uniform terminology, classifications, budgetary, and accounting practices be estab-

lished throughout all the services along administrative lines of responsibility, so that fiscal and management responsibility would go together.

3. That the Armed Forces be required, at least in peacetime, to keep complete, accurate, and current inventories.

As a direct result of the Hoover Commission recommendations, the Eighty-first Congress enacted Public Law 216, the "National Security Act Amendments of 1949." Title IV of this act provided statutory sanction for each component of Recommendation Number 1. It made the budgeting, accounting, internal audit and administrative organization structure and managerial procedures of each department subject to the direction, authority, and control of the Secretary of Defense. It authorized overhaul of the entire military budget system by the Secretary of Defense, and prescribed the adoption of a performance budget. It also prescribed maintenance of property inventories on both a quantitative and monetary basis.

The most apparent immediate effect of Title IV upon the Department of the Army was loss of autonomy in fiscal management. The law required the Secretary of Defense to approve the funding programs and the requests for apportionments by the three departments. It permitted him to *withhold funds appropriated for a particular purpose and to allocate a larger amount of funds to a particular activity than that which was originally planned by the department concerned*—although the larger amount had to remain within the limits of the total appropriation.

Another change of importance brought about by Title IV was the establishment of the Office of Comptroller within the Department of the Army (also Navy and Air Force). This action brought—for the first time—the related activities of budgeting, accounting, reporting, internal audit, and administrative organization structure and managerial procedures incident thereto, under a single head at the highest departmental level. In furtherance of the Hoover Commission principle of civilian control, Title IV furthermore required that the Comptroller or the Deputy Comptroller within each department, be a civilian.

Recommendation Number 2

The second recommendation may be classified as the most important and far-reaching recommendation insofar as its effect on the Department of the Army is concerned.

Its intent was to establish within the Defense Department singleness of control in the broadest sense. On the theory that "singleness of control is the essence of efficiency," the commission recommended the complete dissolution of each service secretary's authority and the revestment of that authority in the Secretary of Defense. The text of the recommendation in substance was:

1. That the principle of unified civilian control and accountability be the guiding rule for all legislation concerned with the National Military Establishment, and that full authority and accountability be centered in the Secretary of Defense—subject only to the President and the Congress.

2. That all statutory authority now vested in the service departments, or their subordinate units, be granted di-

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rectly to the Secretary of Defense, subject to the authority of the President, with further authority to delegate them as he sees fit and wise.

3. That the Secretary of Defense shall have full authority—subject only to the President and the Congress—to establish policies and programs.

4. That the service secretaries be deprived of their privilege of appeal over the head of the Secretary of Defense; that they be directly and exclusively responsible to him; that the Secretary of Defense be the sole agent reporting to the President; that the service secretaries—to clarify their positions—be designated the Under Secretaries for Army, Navy, and Air Force.

5. That specific provisions be made that the three military services shall be administered by the several under secretaries—subject to the full direction and authority of the Secretary of Defense.

6. That there shall be Joint Chiefs of Staff representing the three services, appointed by the President and subject to confirmation by the Senate, and that the Secretary of Defense—with the President's approval—shall appoint a chairman to preside over the Joint Chiefs of Staff and to represent, and report to, the Secretary of Defense.

7. That all administrative authority be centered in the Secretary of Defense—subject only to the authority of the President—including full and final authority over preparation of the military budget and over the expenditure of funds appropriated by the Congress.

8. That the Secretary be provided with an Under Secretary of Defense—who shall be his full deputy and act for him in his absence—and three assistant secretaries; and that the Secretary of Defense be empowered to set up such personal assistants to himself as he shall require to relieve him of day-to-day detail, to advise and assist him in planning and carrying out programs, and to organize this staff as he sees fit.

9. That full authority for the procurement and management of supplies and matériel be vested in the Secretary of Defense. The Secretary can delegate this authority to the Munitions Board (or to other officers or agencies as he may determine) with directions to expedite, by all possible means, the elimination of costly duplication in procurement and waste in utilization among the three services. Further recommendations regarding the co-ordination of military with civilian supply management are contained in the commission's report on the Offices of General Services.

The major components of Recommendation Number 2 were enacted into law by Public Law 216, approved 10 August 1949. With specific reference to each component of the recommendation, Public Law 216 had the following effect:

1. Except for certain defined combatant functions and the interservice transfer of officers, complete *direction, authority,* and *control* over the three military departments was vested in the Secretary of Defense.

2. While the statutory authorities granted the three services were not specifically revised to revest such authorities in the Secretary of Defense, Section 411 of Public Law 216 did provide that where laws, orders, and regulations are inconsistent with the powers, duties, and responsibilities enacted by Title IV, such laws would be considered repealed.

3. By giving him "direction, authority, and control and the right to approve or disapprove expenditures of funds," the Secretary of Defense was certainly given full authority to establish policies and programs for the three services.

4. In enacting Public Law 216, the Congress specifically rejected the recom-

mendation to deprive service secretaries of right of appeal over the head of the Secretary of Defense. Moreover, the law as enacted, provided that individual members of the Joint Chiefs of Staff could, after informing the Secretary of Defense, present on their own initiative, any recommendations relating to the Department of Defense that they deemed proper.

It is interesting to note that four of the commissioners, including Mr. Hoover, dissented from the recommendation to change the designation of the service secretaries to Under Secretaries of Defense.

5. Even though Public Law 216 expresses the intent of Congress "To provide three military departments, separately administered . . .," in the final analysis, the Secretary of Defense has complete authority over the administration of the departments by the "direction, authority, and control" and the right to approve or disapprove policies and programs of whatever nature, vested in him by the same statute. This is in complete accord with the Hoover Commission recommendation.

6. In connection with the appointment of a chairman to preside over the Joint Chiefs of Staff, Vice Chairman Dean Acheson, Commissioners Mead, Pollock, and Rowe, did not agree with the recommendation of the other members, and, with the intention of completely centralizing military control, submitted a separate recommendation that a Chief of Staff of the Armed Forces be authorized. In actuality, their concept of the duties, responsibilities, and powers that would be vested in a supreme Chief of Staff coincide remarkably with the duties, responsibilities, and powers subsequently exercised by General Omar N. Bradley, first chairman of the Joint Chiefs of Staff.

7. Subdivision "g" of Recommendation 2 was accomplished by the enactment of Title IV, Public Law 216, as heretofore discussed. Subdivision "h," relating to the appointment of an Under Secretary and three Assistant Secretaries of Defense, also was provided for in Public Law 216. Subsequent reorganizations have changed the original structure to provide a deputy secretary and additional assistant secretaries.

8. A liberal interpretation of Public Law 216 could result in the centralization of all procurement responsibility for the Department of Defense in the Office of the Secretary, in spite of Public Law 413, Eightieth Congress, which sets out in detail the procurement responsibilities of the individual services. Certainly, the intent of Congress, as expressed in Public Law 216 and in numerous committee reports, supports the centralized direction of procurement activities advocated by the Hoover Commission. However, complete centralization of procurement has never been accomplished by the Department of Defense.

As previously mentioned, this recommendation was extremely far-reaching and was, in fact, the pattern for the National Security Act Amendments of 1949 (Public Law 216).

Recommendation Number 3

In its third recommendation, the commission entered the controversial field of personnel management and recommended as follows:

a. That, in line with our recommendation below for an integrated system of military personnel administration, military education, training, recruitment, promotion, and transfers among the services be put under the central direction and control of the Secretary of Defense.

b. That the recruitment of civilian employees should be decentralized into the National Military Establishment under standards and procedures to be approved and enforced by the Civil Service Commission.

c. That full authority be vested in the Secretary of Defense, subject only to policies established by the Congress and the President, to prescribe uniform personnel policies for civilian and military personnel throughout the several services.

Neither the National Security Act Amendments of 1949 nor subsequent legislation include authorization for the transfer of commissioned officers between the services. While the Hoover Commission recommended such action, the Congress specifically disapproved it due to a fear that the authority, if granted, would be used to dissolve the Marine Corps. Furthermore, at the time interservice transfers were under consideration, there was a concern that large numbers of Army and Navy officers would apply for transfer to the newly created Air Force to "get in on the ground floor" thus enhancing their opportunity for promotion.

There have been many bills introduced in both houses of Congress since 1949 to provide for the interservice transfer of officers. Each proposal included safeguards to prevent a possible mass exodus of officers from any service as the result of enactment. However, none has been enacted into law.

With respect to the centering of military training, education, and recruitment in the Secretary of Defense, it might be said that such activities, being a responsibility policy-wise of the Joint Chiefs of Staff, were already under the control of the Secretary of Defense at the time of the Hoover Commission recommendation.

The Personnel Policy Board, Office, Secretary of Defense, had been given considerable latitude in personnel policy matters but recognized the Joint Chiefs of Staff responsibility in the major areas.

This recognition resulted in a considerable degree of responsibility being maintained by the individual services by virtue of their representation on the Joint Chiefs of Staff. The Hoover Commission concept of personnel management began to show its influence during the regime of General George C. Marshall as Secretary of Defense, when he appointed an assistant secretary with primary responsibility in the fields of personnel and manpower. This new office eventually absorbed, to a great extent, the vested interest of the Personnel Policy Board, the Joint Chiefs of Staff, and the individual services in over-all personnel policies and programs.

Recommendation Number 4

The fourth recommendation was designed to improve teamwork and co-ordination throughout the National Military Establishment.

It subscribed to a policy of more adequate and effective relations at the working level between the Joint Chiefs of Staff, National Security Council, Central Intelligence Agency, Research and Development Board, Munitions Board, and the National Security Resources Board. Generally speaking, this particular recommendation had little direct effect on the Department of the Army. Many aspects of the recommendation have been implemented by legislative action and administrative decree.

Recommendation Number 5

To analyze the fifth recommendation, it is necessary to refer to House Document Number 128, Eighty-first Congress, which contains the Hoover Commission report on all medical activities of the Government. Included in this report were the views and recommendations of the commission with respect to medical activities of the Armed Forces.

In essence, the commission proposed that a United Medical Administration be created in which would be consolidated most of the large-scale activities of the Federal Government in the fields of medical care, medical research, and public health.

The proposal contemplated that the major part of all hospital care required by the military forces in the continental United States would be provided by the United Medical Administration. As a part of the program, all general hospitals of

the Armed Forces in the continental United States, and all station hospitals, except those at outlying posts, would be transferred to the new agency. Each service would be permitted to retain one medical center such as the Army Medical Center (Walter Reed) and the Bethesda Naval Hospital.

Further, professional personnel of the Armed Forces would be assigned to the new administration for duty, research, and training.

The commission report admitted that the Armed Forces must have supporting medical service subject to military control. However, the overriding theory as expressed in the report, was that the transfer of general and station hospitals to a single national hospital system would eliminate much of the existing waste and duplication and would conserve scarce professional manpower.

The subject of medical care and hospitalization for dependents of military personnel was discussed in detail in the commission report.

No specific recommendation for curtailment in whole or in part of this service was made. The commission recognized that the right to medical care for dependents is an inducement to remain in the Armed Forces, and that the care of dependents by military doctors overseas and in posts in this country remote from adequate community facilities and professional personnel, is essential. The basic question raised by the commission was what medical care, if any, does the Government owe to the dependents of members of the Armed Forces, and how should this care be given?

The Congress has authorized medical care for dependents for over 65 years by annual appropriations, yet no statement of policy on this subject has ever been made! The Hoover Commission maintained that Congress must clearly enunciate their decision in this matter for future planning.

Recommendation Number 6

The intent of the sixth recommendation was centered around the civilian aspects of war. The development of defenses against unconventional warfare, the increased impetus to be given psychological warfare, and the development of economic warfare programs were pointed out as urgent requirements. The commission made no detailed recommendation as to which agency of the Government should be charged with implementing the various phases. Some aspects of this particular recommendation have been implemented through legislative action and by executive order. However, because of its tremendous scope and political implications, much of it remains unimplemented.

Other Recommendations

The Hoover Commission report on the National Security Organization discussed above contained the major points of concern to the Army. However, reports submitted on other agencies of the Government contained certain provisions which involved military interests.

Executive Branch Management

In its first report to Congress, the commission stated that the Executive Branch of the Federal Government was not organized in a manner to permit effective control by the President; that the line of command and supervision from the President down through his department heads to every employee, had been weakened, or actually broken, in many places and many ways. The line of responsibility still existed in constitutional theory but had been worn away by administrative practices, political pressures, and by detailed statutory provisions. The commission cited as an example the Corps of Engineers having the statutory duty of prepar-

ing river development plans, while the Secretary of the Army, and the President, were not responsible for the selection of projects.

As one result of its findings in this study, the commission prefaced its report to Congress with a plea that the President be granted reorganization powers; that he be authorized to transmit plans of reorganization to the Congress without restriction by limitations or exemptions. This recommendation was effectuated by the enactment of Public Law 109, "The Reorganization Act of 1949." In brief substance, Public Law 109 authorized the President to submit numbered reorganization plans to the Congress which would automatically become effective after the expiration of 60 calendar days, if neither House disapproved the plan by a constitutional majority within the 60-day period. The law also granted the President authority to create new executive departments. It was enacted for a specified period of time and would have expired on 1 April 1953, had not the Eighty-third Congress extended its provisions until 1 April 1955.

This report, being of general application to the Executive Branch, was considered as a skeleton which was to be filled out by supplemental reports on each of the major activities. However, the inherent recommendation, subsequently activated by the Reorganization Act of 1949, became of vital concern to the Department of Defense in its potentialities. Many changes have been made under its authority. Many more could be made.

Interior Department

One of the most controversial reports prepared by the commission concerned activities of the Department of Interior. This report proposed that the major subsoil, water development, and public works activities of the Government be centered in the Department of Interior. To accomplish this centralization of activity, it was recommended among other things, that civil functions of the United States Corps of Engineers pertaining to flood control, river development, and harbor development, be transferred to the Interior Department. This recommendation was based upon the following findings:

a. There is no effective agency for the screening of proposed water development projects to determine their economic and social worth.

b. There is duplication and overlap of effort, and policy conflicts exist between the Army Engineers and the Bureau of Reclamation in construction of, and jurisdiction over, projects.

c. There is inherent conflict between the most efficient operation of storage dams for the purpose of flood control and of dams used for the generation of hydroelectric power. As flood control concepts are in the hands of one agency of the Government and power concepts in another, there is inevitable conflict of the highest importance in design and operation, which can be solved only by a consolidated administration.

It is interesting to note that the Bureau of the Budget analysis of this particular recommendation pointed out that substantive legislation would not be required to divorce the Corps of Engineers from its civil functions.

The President has the authority to initiate the change by virtue of the Reorganization Act of 1949. However, final authority would rest with the Congress in its control of appropriations and its power of disapproval over presidential reorganization plans.

Overseas Administration

The final report prepared by the commission was divided into three parts—Overseas Administration, Federal-State Relations, and Federal Research. The recommendations made on the administration of overseas activities were of the utmost interest to the Army.

While recognizing the inherent problems in the administration of overseas areas, particularly of the occupied areas

wherein demilitarization had been accomplished but military government remained, the commission had no positive recommendations to improve the situation. Several alternatives were suggested for consideration, the first of which proposed to assign the responsibility for administration of the occupied areas and the Panama Canal to a special secretary who would report directly to the Secretary of Defense. The second alternative, designed to accomplish more completely the integration of overseas administrative activities, was the creation of a separate Administration of Overseas Affairs to which would be transferred all administrative responsibilities abroad, excluding, of course, the diplomatic and consular services of the State Department. This recommendation unquestionably became a major factor in causing later studies to be made, and implementing actions taken, to transfer many of the occupation burdens from Army to State Department cognizance.

Summary

There has been no attempt in this article to debate the merits or demerits of the several recommendations made by the Hoover Commission. Rather, an attempt has been made to review, as a matter of general interest, those original recommendations that had a definite impact on the Army.

From this brief review it is readily apparent that the commission has left a lasting impression on the military affairs of the nation.

It should be apparent also, that a new Hoover Commission will have the confidence of the people and the ear of the Congress.

There can be no comprehensive survey of the executive structure of the Federal Government without involving the Department of Defense. What changes in our military structure will follow in the wake of Mr. Hoover's latest effort? Only time will tell.

If we are to effectively implement our plans and programs, we must be diligent in our efforts toward improving the organization of the military establishment. Many constructive changes have been made possible as a result of the President's Reorganization Plan relating to the Department of Defense, which became effective on 30 June 1953. The Secretaries of the Military Departments and their Chiefs of Staff are studying ways and means to achieve better organization within their respective services.

Deputy Secretary of Defense Roger M. Kyes

Map Production and Supply

Colonel Charles V. Ruzek, Jr., *Corps of Engineers*
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ONE of the first and most important items required for any kind of a military operation is an adequate map. Many of us are inclined to *assume* that there are adequate maps of any area where we might contemplate military operations. While reasonable progress is being made toward compiling maps of areas of likely military operations, actually only a few areas of the world's land surface are covered with maps which are suitable for military operations. Within the past 15 years we have developed methods of rapidly compiling maps—compared to methods previously used. However, even with these modern methods, mapping operations take considerable time. Proper planning is essential to any mapping program.

With the present world situation we cannot hope to have every likely area of military operations suitably mapped. However, we can attempt to compile data from which maps can be produced for areas in which we contemplate military operations.

The military commander is interested primarily in having maps available when they are required. This is the mission of the Corps of Engineers in its mapping function. The commander and the planner should appreciate what must be done and what is presently being done to provide them with accurate maps.

Because of the technical difficulty as well as the time requirements involved, planning for map supply must be initiated well in advance of the need. As in all preparations for war, planning should be initiated during peacetime. In considering the problems involved, commanders and staff planners should have an understanding of the over-all organization which is responsible for providing the initial map coverage, as well as an understanding of the field organization which is required to expand this initial map coverage, to keep it up-to-date, and to distribute maps in sufficient quantities to meet operational needs.

Joint Intelligence Committee

In order to carry out a mapping program efficiently, there must be one central agency to correlate mapping requirements, to plan a mapping program, and to control the production and distribution of maps to our military forces. The centralized control for mapping activities by the United States is achieved through the Joint Intelligence Committee of the Joint Chiefs of Staff. This committee, composed of the Intelligence Officers of the three major services, has been delegated broad co-ordinating authority in the fields of mapping, charting, and related activities.

Photo and Survey Section

This authority has been further delegated to a permanent working group

To carry out an efficient mapping program, there must be one central agency to correlate mapping requirements, plan a mapping program, and control the production and distribution of maps to our military forces

called the Photo and Survey Section of the Joint Intelligence Group.

The Joint Photo and Survey Section is responsible for co-ordinating all of the mapping and charting activities of the armed forces. It formulates mapping and charting requirements, prepares joint mapping plans, determines priorities of mapping areas, and assigns specific responsibilities in the mapping and charting fields to the Army, Navy, and Air Force.

The specific responsibilities of the Army, Navy, and Air Force for the production of maps and charts, and for the co-ordination of mapping programs undertaken individually, or jointly, by the three services have been established by Joint Chiefs of Staff directives. Thus, a co-ordinated effort on the part of the three services is achieved.

Civilian Agencies

In addition, mapping programs of the principal civilian agencies are integrated into the over-all mapping program of the Department of Defense. Maps, charts, and related data produced by the various civilian mapping agencies are, to a great extent, adaptable to military use.

Such production is considered to be a normal contribution to the Department of Defense as well as a responsibility to the general public.

Accordingly, the three military departments of the Department of Defense indorse and support those elements of the map and chart production programs of the civilian agencies whenever these programs conform to the primary requirements of Joint War Plans as to objectives and areas. The Army is presently supporting certain mapping programs of the United States Coast and Geodetic Survey and the United States Geological Survey.

A G2 Responsibility

The Assistant Chief of Staff G2, Department of the Army, is responsible for all mapping and charting activities of the Army. He is responsible for ascertaining requirements and priorities for the map and chart coverage required for planning and conducting military operations. He must also take the necessary action to meet these requirements and to secure and alert appropriate production agencies at the earliest possible time. He is assisted by an advisory board known as the Mapping Committee, Department of the Army, which is composed of representatives from the Assistant Chief of Staff, G2 and G3, the Chief of Engineers, and representatives from other arms and services when necessary.

Mapping Committee

The Mapping Committee is an advisory body which assists the Assistant Chief of Staff G2 in determining and meeting Army mapping requirements. It also studies existing and proposed mapping organizations and techniques, reviews mapping policies and regulations, and makes recommendations for the development of new or improved mapping methods, organizations, and equipment.

The Chief of Engineers

The Chief of Engineers is the operating member of the Mapping Committee and has the following responsibilities:

1. The preparation of specifications and priorities for aerial photography required for mapping, and the final evaluation of completed aerial photography.

2. The execution of ground surveys required for mapping.

3. The development and use of photo-

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grammetric (map compilation) processes involved in production of military maps.

4. The preparation of plans and policies pertaining to military topographic surveys and maps, including all technical aspects of mapping such as map design, accuracy, methods, and allowances, as well as map reproduction, supply, and distribution.

5. Co-ordination with joint and allied mapping agencies, as required, to avoid duplication and to ensure the maximum uniformity of maps produced.

6. The preparation of advance plans for the map support required for any military operation, including the topographic troops required, and the quantities of maps to be reproduced by base resources and shipped to theaters of operation.

7. The operation of the Army Map Service.

The Corps of Engineers, through the Army Map Service and engineer topographic units, is trained and equipped to establish ground control, prepare maps and terrain studies by photogrammetric and other processes, and to reproduce and distribute maps required by the Department of the Army for planning and operational needs.

Army Map Service

The Army Map Service is the chief source of maps for the Army in time of peace and is charged with carrying out a large part of the mapping responsibilities of the Chief of Engineers.

In time of war, the initial stocks of large-scale maps issued to troops and a supply of small-scale general and strategic maps are normally provided by the Army Map Service.

Theater of Operation

In a theater of operation, the theater commander is responsible for the conduct of mapping, charting, and related activities in support of the missions assigned by the Joint Chiefs of Staff within the limits of the theater mapping and charting capabilities. This responsibility also includes:

1. Advising the Joint Chiefs of Staff as to map and photo requirements which cannot be met by organic resources.

2. Executing such specific mapping and charting projects as may be assigned by the Joint Chiefs of Staff.

Theater Co-ordination

The Assistant Chief of Staff G2 of the theater formulates plans and policies for theater mapping and charting operations, determines requirements and priorities for reproduction and distribution of maps, and co-ordinates the program with the theater engineer and the theater Air Force commander.

The Theater Engineer

The actual mapping operations are carried out under the direction of the theater engineer, who is responsible for:

1. The supervision and maintenance of technical efficiency of all mapping operations in the theater.

2. Advising the theater commander on requirements, plans, and policies related to mapping and charting.

3. Furnishing the theater Air Force commander with requirements and specifications for mapping photography.

4. Procuring complete files of available maps and ground control data.

5. Supplying the field artillery with data concerning ground control.

Engineer topographic troop units perform the technical mapping operations in the theater. In order to understand these highly specialized troop units, one should have a general knowledge of the steps involved in military map making and distribution. These steps directly determine the type and structure of our engineer topographic troop units.

Mapping Operations

The first step in the mapping operation is the procurement of aerial photography. The most modern maps are made from aerial photographs, because of the speed and accuracy of this method over ground mapping methods.

The procurement of aerial photography for Army mapping is an Air Force function, but the preparation of specifications for the aerial photography required for Army mapping is an engineer responsibility. The evaluation of such photography after it is taken, to ensure its suitability for mapping purposes, is likewise an engineer function.

The second step in the mapping operation is the establishment of ground control.

This refers to the execution of a sufficient amount of ground survey work by engineers to establish the horizontal and vertical positions (latitude and longitude and elevations above sea level) of a minimum number of ground points that are identifiable on the aerial photographs. These are required to tie the aerial photography to the ground.

The third step in the mapping operation is map compilation. This function involves the compiling of both planimetry and relief data from the aerial photographs by means of stereoscopic plotting instruments.

The fourth step of the mapping operation is the reproduction of the map after it has been compiled, so that it can be furnished to the using troops in sufficient quantities.

The fifth step in the mapping operation, and perhaps the most important, is map distribution.

This, of course, involves getting the finished product into the hands of the using troops at the time and place needed. All of the previous functions are wasted unless this last one is properly performed.

Topographic Troop Units

The principal topographic troop units are:

1. The engineer base topographic battalion.
2. The engineer topographic battalion, army.
3. The engineer topographic company, corps.

In addition, there are special topographic teams which are attached to organic topographic troop units as an augmentation to meet different and varying situations.

Base Topographic Battalion

The engineer base topographic battalion is a cellular type of unit. It is composed of a headquarters and service company, a base survey company, a base photo-mapping company, a base reproduction company, and a base map distribution company. These companies, as indicated, perform the above functions of the mapping operations. In special cases, the battalion may be composed of varying numbers of these companies, depending on the requirements dictated by the mapping situation. The photo-mapping company of the base topographic battalion is equipped with multiplex stereo-plotting instruments and is capable of original, accurate topographic mapping of extensive areas. Being a base plant, this battalion, except for the survey company, is a semipermanent installation and cannot be easily moved. One base topographic battalion is normally assigned to a theater and it operates under the control of the theater engineer as the Theater Map Service.

Topographic Battalion

The engineer topographic battalion, army, is a mobile-type unit composed of a headquarters and service company containing a survey platoon, a photo-mapping company, and a map reproduction and distribution company. This battalion nor-

mally furnishes the bulk of strategic and tactical maps, photo-maps, and defense overprints required by the field army. Its map compilation facilities are limited principally to map revision work due to the lack of stereo-plotting instruments.

The reproduction company reproduces maps for use by the field army and the map distribution platoon of this company operates the army map depot. This battalion is directly controlled by the army engineer and one battalion is normally assigned to a field army.

Topographic Company

The engineer topographic company, corps, is a mobile unit composed of the same elements as the army battalion but of platoon size. It consists of a company headquarters, a survey platoon, a photo-mapping platoon, and a map reproduction and distribution platoon. The company assists the army battalion in revising tactical maps, prepares any special photo-maps, and defense overprints required by the corps, and operates the corps map depot. It operates under the control of the corps engineer.

One such company is usually assigned to a corps. A primary function of the survey platoon of this company is to establish and furnish survey control data to the artillery observation battalions for control of corps and divisional artillery fires.

Fundamentals of Planning

Every commander and staff officer should have an understanding of the fundamentals of staff planning necessary to meet mapping requirements in a theater of operations, the methods of computing map allowances for troop issues, and some of the difficulties encountered and methods or solutions used in planning distribution of maps.

Planning and supervising a mapping operation involves two distinct phases:

1. Providing, in sufficient quantities, adequate map coverage of the area of operation.

2. Providing storage and distribution facilities to ensure timely distribution.

To provide the adequate map coverage, mapping operations are further divided into two general phases:

1. Advance mapping of general areas of possible operations.

2. Mapping during operations to improve the map situation.

In peacetime, the Corps of Engineers, through the Army Map Service and engineer topographic units, is continually engaged in compiling and revising maps of all potential combat areas. These maps are reproduced in limited quantities for distribution and reserve, but the main emphasis is placed on securing a complete file of map material which will be available for reproduction and distribution in the event of an emergency.

Mapping during military operations is carried out by the base and army topographic battalions, corps topographic companies, and other mapping detachments which may be assigned to a theater. These operations may be supplemented by the Army Map Service. These units can perform map compilation and revisions, as required, provided they are furnished the necessary aerial photography in sufficient time. Operational mapping performed by the topographic units assigned to armies or corps is co-ordinated by the theater engineer to the extent possible consistent with the technical missions of the field army and corps.

A Theater Mapping Operation

To illustrate the tasks involved in providing map coverage, we should consider a theater mapping operation. The planning for this operation is accomplished by the theater engineer staff, and involves:

1. An estimate of total map coverage

requirements and phased coverage requirements.

2. The determination of map coverage to be supplied by higher echelon, such as the Zone of Interior.

3. The establishment of a map production plan within the capabilities of the topographic units.

4. Determination of requirements for aerial photography.

5. Determination of requirements beyond theater resources, followed by an early request for support, if needed.

Coverage

The estimation of total map coverage requirements is a G2 responsibility, but the engineer staff, as the map-producing agency, is in the best position to advise G2 on what map coverage (scale, types) is desirable and feasible for the operation. The area to be covered is designated by G2 in co-ordination with G3.

Scales

A map supply plan for major military operations should provide maps of the following scales: 1:25,000 topographic, 1:50,000 (if 1:25,000 is not available), 1:100,000, 1:250,000, and 1:1,000,000. Not all of these scales will be available for any single operation and, in some instances, photo-maps may have to be substituted for the topographic maps. The 1:1,000,000 map will usually be provided by the Zone of Interior.

In addition, special maps for critical operations may be required. These include 1:10,000 or larger-scale beach assault maps, 1:10,000 city plans, and large-scale maps of critical defensive works or airfield sites.

Phasing

In addition to the total coverage requirements, phasing of the requirements within this total coverage must be considered. Map making is a time-consuming process. Therefore, mapping must be planned for the initial areas of operations first, and phased successively into the areas of secondary or later importance. This requires a knowledge of the tactical plan, including time schedule, and should be carefully co-ordinated with the G2 and the G3.

Existing Coverage

The engineer must secure, through technical channels, information concerning the nature and extent of existing map coverage of the area that is to be provided by the Zone of Interior. He should transmit this information with indices and samples as soon as available to the theater G2. Then in conjunction with his previous estimate of total coverage and phased coverage requirements, the engineer should be ready to give G2 his map production plan for the operation.

Production Plan

The map production plan is simply a plan to provide, by time phases, new mapping or map revisions to make up the differences between the estimated total coverage requirements and the coverage available from the Zone of Interior. The plan must include provisions for securing the necessary aerial photography from the Air Force, as well as establishing ground control where feasible, and must also be based on a realistic appraisal of the capabilities of the topographic units available.

Quantities

As mentioned previously, concurrently with the planning of required map coverage, but discussed separately for clarification, is the question of map quantities. This refers to the total number of copies of each map required to meet the needs of the staffs and troop units. It involves:

1. An estimate of the total number of copies of each map sheet or group of map sheets required for the military operation,

including phased quantity requirements.

2. The establishment of a map reproduction plan to reproduce, with the printing facilities available, the maximum possible amount of the required number of copies.

3. The determination of the remaining quantity, beyond the resources available, to be furnished from Zone of Interior stocks, and the submission of an early request for additional support, if needed.

Map Distribution

After all map coverage requirement problems have been solved and proper quantities computed, reproduced, or phased, and production and reproduction are running on schedule, there still remains the critical element of map supply. This is the final phase of distribution whereby the required maps are placed in the hands of the users at the time and place required. Map distribution is not a simple process. Frequently, maps have been regarded as a supply item subject to the same rules of production and issue as other Class II and IV items. They have been often incorrectly considered by some headquarters, as a Class II or IV item of engineer supply.

Distribution of the required map coverage can be made only if tactical plans have been worked out in detail. Quantity and area coverage of map issues must be in exact agreement with the assignment of the tactical missions. Constant liaison is required on the part of the engineer with the G2 and G3 so that any changes in missions are known at once.

The method for distributing maps as a *separate* item is established military doctrine. It cannot be altered without upsetting the principles of command responsibility, general staff initiative, and technical services operation. The senior engineer officer in each echelon of command is responsible for the distribution of maps within the command. Requisitions for maps, including bulk stocks, will pass through engineer channels.

Security

The relation of maps to a military operation is so intimate that, in spite of their bulk, they are actually intelligence documents rather than items of supply. In some cases, in fact, maps may be one of the most important intelligence documents in the hands of troops. It must also be borne in mind that bulk production, movement, and issue of maps indicate accurately the magnitude of forthcoming operations and have a direct relation to the exact place where an operation is to occur.

Revisions

New map data revealed by the constantly expanding resources of information may quickly render maps obsolete and may require issue of improved editions in the course of a single operation.

Maps should not be printed and their distribution planned too far in advance. Production and issue must be phased to ensure the application of the most recent terrain information which can be safely utilized. Consideration must also be given to the bulk and weight of large map stocks.

Timing

The timing of map issues is most important. It is impossible for troops in the field to carry with them more maps than they will require for a few days. In fact, the bulk of the maps needed to cover any substantial area makes it impracticable to supply units for a prolonged period when operations are mobile. In addition, a premature supply of maps in which combat personnel are not immediately interested may be wasted because such maps tend to become lost or discarded and replacements will be required when the need for the maps becomes urgent. Also, a change in an opera-

tion plan, which may be made on very short notice, might void previous map issues and require a completely new issue of maps.

Large-scale maps, once issued, cannot be withdrawn readily for reissue to other units. In mobile operations, any attempt to withdraw maps for the purpose of restoring and reissue requires more time than is usually available for this purpose. Therefore, premature issues of maps to large units whose mission is subsequently changed, may jeopardize the map supply plan by requiring duplicate issue of the same maps to different units. The quantity of maps available is not usually sufficient to permit such an extravagant practice. Extreme care must be taken in planning the correct timing of map issues.

Advance Map Depot

Maps are distributed to the using troops by means of a system of map depots. In the communications zone there are normally advance map depots, located near its forward limits, which are established to provide support to each field army.

A base map depot is located farther to the rear. Both the base and advance map depots in the communications zone are operated by the base map distribution company of the engineer base topographic battalion.

Army Map Depot

The army map depot is located in the army service area, usually near the army headquarters. In a rapidly moving operation, it may be necessary to operate two army depots which leap-frog as the army advances.

The army map depot is operated by the map distribution platoon of the army topographic battalion; if necessary, the platoon may be augmented by an additional map distribution platoon.

Corps Map Depot

Corps map depots are located in the corps service area and are operated by a section of the corps topographic company. They have the same functions as the army map depot except on a smaller scale.

Summary

Maps are important documents in the hands of military forces. Not only are maps essential, but they must be reliable, accurate, and supplied in a never-ending stream to keep ahead of military operations.

In order to carry out a mapping program efficiently, there must be one central agency to correlate mapping requirements, to plan a mapping program, and to control the production and distribution of maps to our military forces.

Map distribution is not a simple process. There is a difference between maps and other supplies and there are many features which set maps apart as a peculiar item which must be separately handled by an independent system established for this specific purpose.

Every commander and staff officer should have an understanding of the fundamentals of staff planning required to meet mapping requirements in a theater of operation, the methods of computing map allowances for troop issues, and the methods used in planning the distribution of maps.

INDOCHINA

This article has been digested from "Background," Department of State publication 5092, Far Eastern Series 58.—The Editor.

SINCE 1949, Vietnam, Laos, and Cambodia—independent States associated within the French Union—have been actively engaged in a war and have been building up their national armies to defend their independence. More than a third of all Franco-Vietnamese casualties since 1946 have been suffered by these national forces.

The major military struggle has been waged in Vietnam—the largest of the three Associated States—where each side controls about half the population and half the territory. The military situation there long has been one of near stalemate. Territories change hands only to be exchanged again. The Communist Vietminh bands infiltrate Franco-Vietnamese controlled areas and are then dispersed or destroyed in periodic "clearing operations."

Heavily concentrated in Vietnam, the French Union-Associated States forces slightly outnumber the Communist Vietminh forces. The Vietnamese control the heavily populated areas, including all major cities, the best rice lands, most of the rubber plantations, coal mines, factories, and port facilities, and the strategic Red River Delta of North Vietnam.

The Vietminh—living in the rural areas—the mountains and jungles—are helped by Chinese Communist arms, equipment, technical advisors, and depend in part on guerrilla tactics. The Vietminh's economic situation is precarious, since they are short of rice. Vietminh casualties have been far heavier than those of the Franco-Associated States armies—about 5 to 1—but they have been able to replace their losses, partly by forced levies of peasants.

Under the accords signed by France and Vietnam on 8 March 1949, Vietnam was granted independence within the French Union. Similar accords were concluded with Cambodia and Laos. These agreements give the States complete internal sovereignty, including the right to maintain national armies, and pledge the help of the French Union forces to defend the States in time of need. That pledge was redeemed in dramatic fashion in the case of Laos. The agreements also provide that the foreign policy of the Associated States will be co-ordinated with that of the French Union through the High Council, upon which sit the freely chosen representatives of Cambodia, Laos, and Vietnam.

The young Vietnamese State is making undeniable progress in gaining the confidence and support of its own people. The present Government has pressed and been granted its demands for a greatly increased National Army, the essential symbol of independence under present conditions. It has produced budgets of calendar years 1952 and 1953, promulgated a labor code and a law on freedom of trade-union association, set up a Provisional

The Associated States of Indochina—Vietnam, Cambodia, and Laos—are in a basic struggle to revive their own traditions and adopt foreign concepts in order to raise the standard of living of their peoples

National Council pending election of a National Assembly, established a National School of Administration for the training of civil servants, and held village and municipal elections in all secure areas. The Vietnamese Government has also made progress on an agrarian reform law.

Perhaps most significant among the tangible attributes of sovereignty has been the rapid increase of the National Army. The Vietnamese forces had comprised 60,000 men at the end of 1950, totaled 155,000 in December 1952. On 24 February 1953, the Joint Franco-Vietnamese High Military Committee decided to create units involving about 40,000 men in addition to previously planned expansion of "standard" units of the National Army. At the end of 1953, therefore, the Vietnamese Army, including home guards, was some 200,000 strong.

The Associated States are engaged in a basic struggle to revive and reassert their own historical and cultural traditions and, at the same time, to adopt those foreign concepts and techniques which will enable them to survive in the modern world and to raise the standard of living of their peoples.

Centuries of infiltration have left a tangle of races in Indochina. The majority of the people—some 23 millions—are Vietnamese; another 3½ million are Cambodians; Laotians number 1½ million. A million or so Chinese live, for the most part, in the larger cities. The vast majority of them are concentrated in Cholon. There are also large groups of Thai, Moi, and other tribal peoples.

The Vietnamese have their own language, structure of government, system of education, religion, family patterns, and art forms, although Chinese—and more recently French—influences can be felt in Vietnam's civilization. The Cambodians and Laotians derive their rich culture and traditions largely from Indian influence.

Indochina's economy is dominated by rice which covers 3 out of every 4 acres cultivated. It comprises 90 percent of the average diet. Its cultivation, transport, marketing, or processing is the chief means of livelihood for the majority of the population.

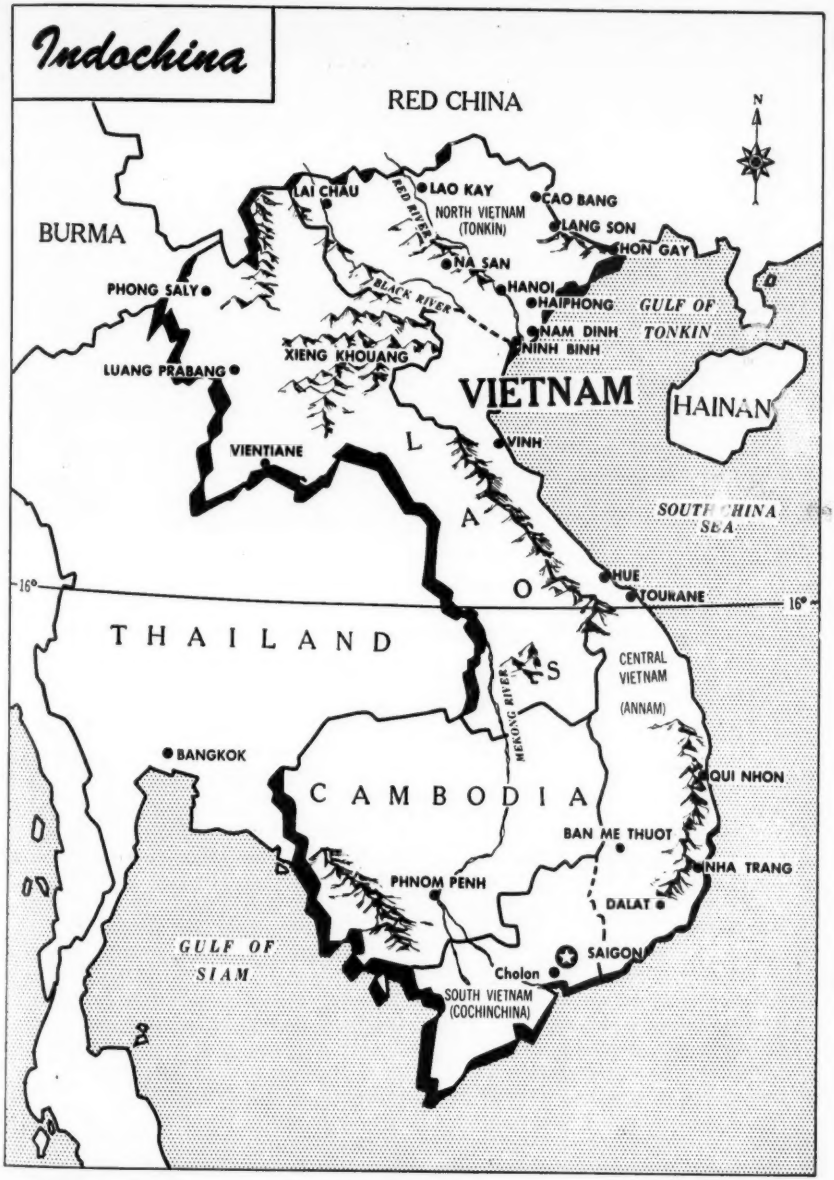
Rubber is the great plantation crop of Indochina. Production is entirely by French-financed companies and accounted before the war for 2 percent of the world production. The plantations, which center around Saigon and extend into Cambodia, have almost returned to their prewar export level in spite of Vietminh guerrillas.

Other Indochinese crops are cotton, tea, coffee, sugar, and pepper, the latter being an important item on the world market. The vast fish resources of the Great Lake of Cambodia and the forests of hardwoods, cinnamon, and cinchona (source of quinine) are also important to the economy.

Indochina has many of the basic natural resources needed to support thriving modern industries. Rich in coal and iron ore, with an ample supply of rubber, Indochina also boasts such resources as copra, timber, tin, zinc, lead, and phosphates.

Industry had only begun to develop in Indochina during the period between the two world wars. The war and the unrest that followed World War II have effectively stopped any economically significant industrial expansion.

Indochina has a hard row to hoe in the years ahead. Given peace and freedom, the Associated States can solve their long-range problems. By dint of hard work and with some assistance from abroad, these nations can meet the needs of their rapidly growing populations and achieve a higher standard of living. But first, they must have peace.


Indochina
RED CHINA
N
BURMA
LAI CHAU
LAO KAY
CAO BANG
RED RIVER
NORTH VIETNAM
(TONKIN)
LANG SON
THON GAY
NA SAN
PHONG SALY
BLACK RIVER
HANOI
HAIPHONG
GULF OF
TONKIN
NAM DINH
NINH BINH
XIENG KHOUANG
LUANG PRABANG
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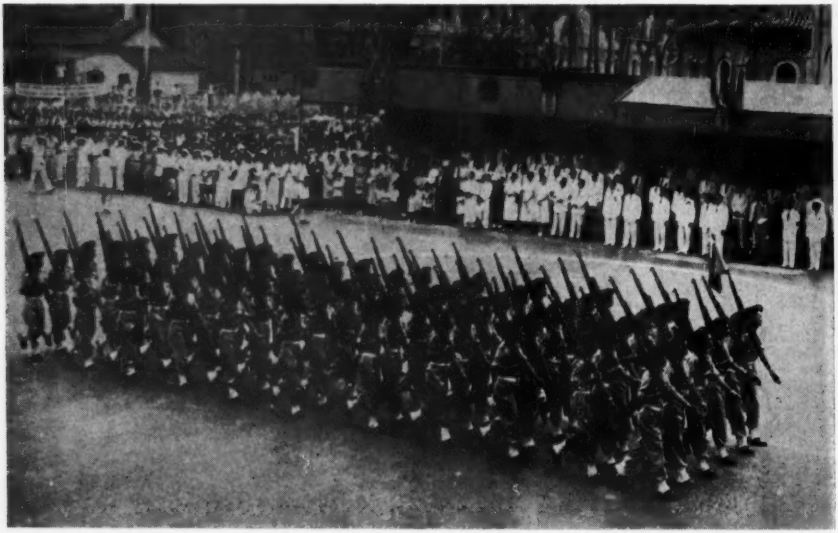
VIETNAM
(ANNAM)
MEKONG RIVER
BANGKOK
CAMBODIA
QUI NHON
BAN ME THUOT
PHNOM PENH
NHA TRANG
DALAT
GULF OF
SIAM
SAIGON
Cholon
SOUTH VIETNAM
(COCHINCHINA)

The United States' contribution to Indochina has been steadily increasing and now amounts to about one-third of the cost of the war. Above, French troops firing an American-made 155-mm *Long Tom* near Tien Lang. Below, The American Aid Mission distributing rice seed to natives in Vietnam.—French Embassy Press & Information Division photos.

The Associated States of Indochina with French Union forces have been actively engaged in a war to defend their independence since 1949. Above, French Union troops fighting near Tien Lang in Indochina. Below, Vietnamese and French Union casualties being evacuated under fire near Tien Lang.—French Embassy Press & Information Division photos.

The North Atlantic Council has expressed its admiration for the valiant struggle by French and Associated States forces against Communist aggression. Above, Vietnamese and French soldiers advancing across a stream near Tien Lang. Below, newly commissioned Vietnamese officers parading.—French Embassy Press & Information Division photos.

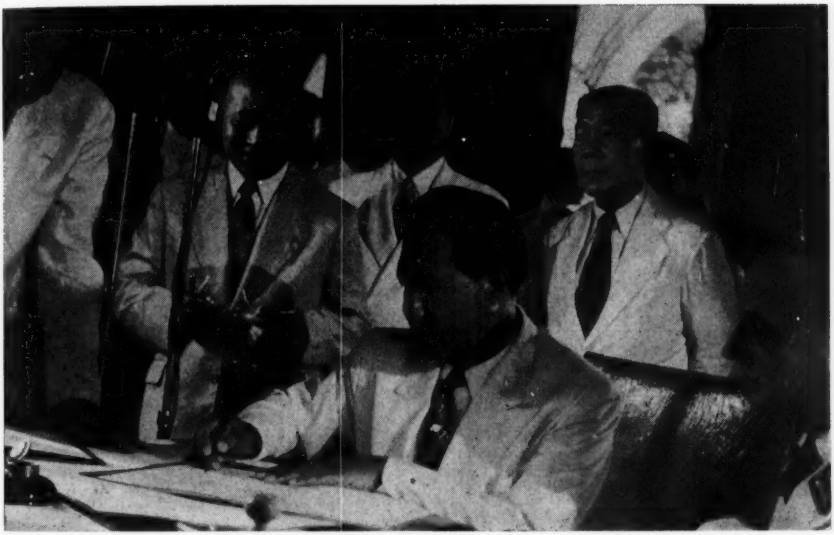


The right to freedom of 28 million Vietnamese, Cambodians, and Laotians is at stake in the struggle between the Associated States and the Communist-inspired Vietminh. Above, Indochinese in a market place in Lang Son. Below, a French soldier making a purchase from a Vietnamese in North Vietnam.—French Embassy Press & Information Division photos.

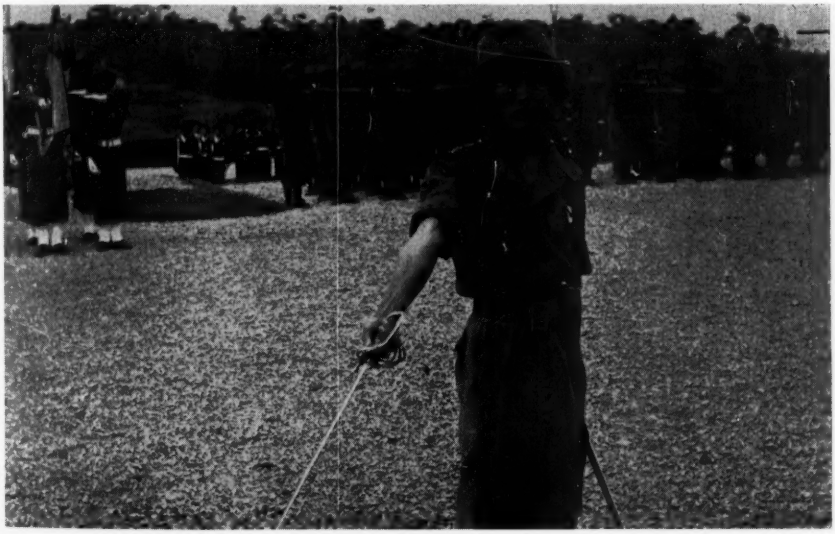
Many Communist Vietminh guerrilla bands infiltrate into Franco-Vietnamese controlled areas but are then dispersed or destroyed in periodic "clearing operations." Above, a Vietminh guerrilla captured by French soldiers. Below, Franco-Vietnamese troops raiding Quang Ngai in Vietnam.—French Embassy & Press Information Division photos.

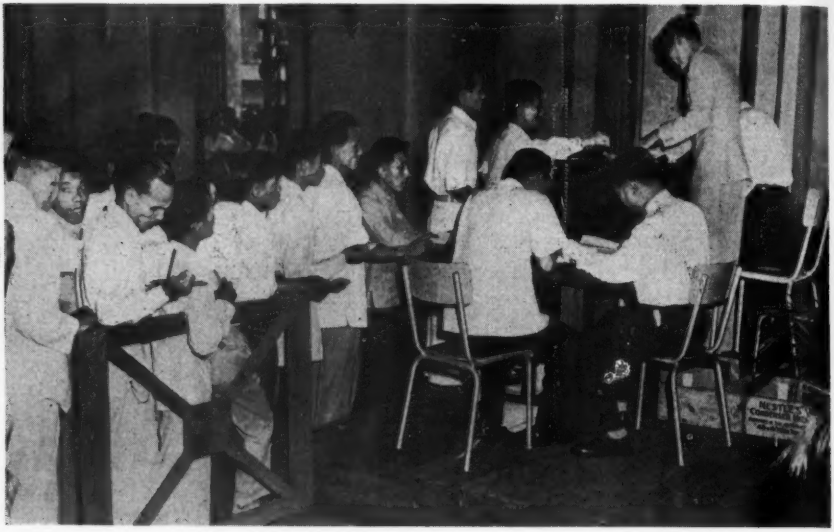
The military situation in Indochina long has been one of near stalemate. Territories change hands only to change back again. Above, French Union paratroops landing near Lang Son to destroy a Communist matériel depot. Below, French paratroops advancing against Vietminh forces in Laos.—French Embassy Press & Information Division photos.

The French Union-Associated States forces control all the major cities in Indochina and the best rice lands. Above, the French Commandant of Moncay, Indochina showing the city's fortifications to French journalists. Below, Franco-Vietnamese troops advancing across a rice field near Tien Lang.—French Embassy Press & Information Division photos.

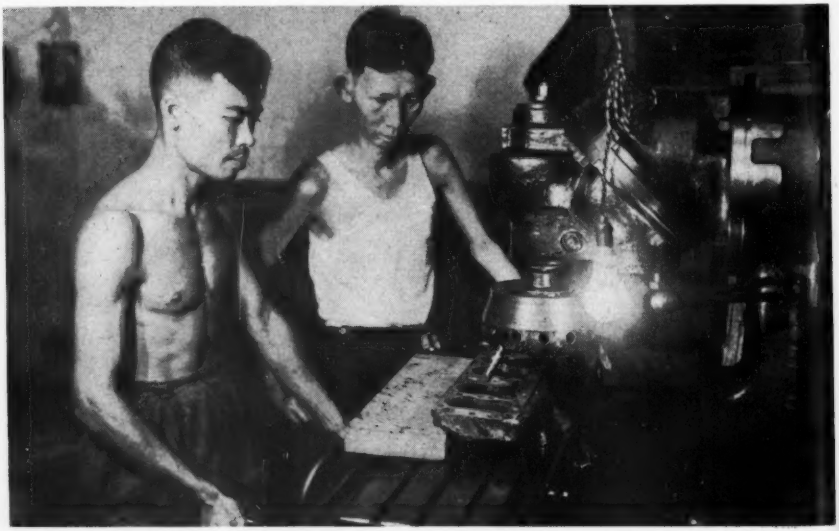


Under the accords signed by France and Vietnam, Vietnam was granted independence within the French Union and the right to maintain a National Army. Above, Vietnam Emperor Bao Dai signing the accords for the transfer of power. Below, a portion of the newly created Vietnam National Army.—French Embassy Press & Information Division photos.





The new Vietnamese Government is making progress in gaining the confidence and support of its own people. It has provided a labor code, made proposals for agrarian reform, and held local elections. Above, Vietnamese voting in an election. Below, Vietnamese workers operating a milling machine.—French Embassy Press & Information Division photos.



WAR FOR MEN'S MINDS

Captain Herbert Avedon, *Signal Corps*
Office of the Chief of Psychological Warfare, Department of the Army

The views expressed in this article are the author's and are not necessarily those of the Department of the Army or the Command and General Staff College.—The Editor.

THE inhabitants of this planet, divided roughly into Communist and non-Communist camps, are presently pitted against each other in a fight to the finish. But unlike pre-mid-century belligerents, the combatants are not limiting their fighting to the destruction of each others' military establishments. This is a much more fearsome war.

This is a war for men's minds.

A war for the minds of all the men of every nation of this globe.

A Fourth Fighting Arm

Being creatures of habit, however, mid-twentieth century mankind also finds itself still fighting in the traditional manner in Indochina, Malaya, and—until only recently—in Korea. These are man-size fights, too, with almost 2 million men opposed to each other on the Korean front alone. These are, and were, only skirmishes when compared to an all-out global war which could personally involve 2 billions.

Being creatures with a strong sense of survival, however, mankind fortunately balks at the prospect of 2 billions locked in land warfare, war at sea, and war in the air, the three traditional methods by which one sovereignty is bent to the will of another. Much has been written about utilization of the three traditional fighting arms—armies, sea and air armadas—as extensions of foreign policy. Very little has been written about the utilization of the fourth fighting arm—psychological warfare (Psywar).

This article will tell something about psychological warfare in Korea where, in support of the three other fighting arms, Psywar slugged it out in the most intense kind of warfare men have fought so far—the war for men's minds.

Psywar

By the immutable logic of evolution, it is probably not strange to find that it has been in the midst of the three traditional methods of fighting that the fourth, Psywar, may have been helping the world learn to fight some day without destroying life. Perhaps from now on, the warrior species called mankind will occupy itself with the less bloody, although not less devastating, war—the warring called Psywar.

Like the Infantry, which has the mission of "meeting and destroying the enemy," and the Artillery, which is dedicated to "supporting the Infantry by fire," the mission of Psywar is to support the Infantry by "reducing enemy combat effi-

Truth has been and still is one of the most effective weapons which man has found. Friendly psychological warfare makes use of truth as its principal weapon to fight the enemy and reduce his will to fight

ciency." It does this by all means short of the use of armed force. Of interest, perhaps, is that the more enthusiastic devotees of Psywar claim that the term *psychological warfare* is a misnomer, that the military science of warring for men's minds should more properly be called *warfare psychologically waged.*

Psywar, it is claimed, seeks to change enemy attitudes and opinions by means of the spoken or written word. It accomplishes its mission of reducing combat efficiency by producing successive attitudinal changes in individuals among the enemy target group until the desired frame of mind is achieved. *Warfare psychologically waged* actually seeks the same reactions. However, in addition to attempting to change enemy attitudes and opinions by means of the vocal and graphic pressures of more orthodox Psywar, warfare psychologically waged fully utilizes other pressures—pressures which range from armed force to the unexpected impact of candy bars—as integral parts of its operations.

Except in Korea where Psywar—whether it was labeled psychological warfare or warfare psychologically waged—held its own, the Communists have massed a staggering number to fight the free world in this war for men's minds. For the Communist camp has, unbelievably, an estimated *10 million* propagandists, agitators, and others engaged in psychological warfare—in every corner of the world. Our side's psywarring, which has only been a token fight except in Korea, is pretty much limited to some first-rate newspaper propaganda in France and Italy and the radio programs to Soviet satellite populations beamed by the hard-working Voice of America, Radio Free Europe (with its highly successful balloon leaflet barrage) and Radio Free Asia. Except in Korea recently, the fourth fighting arm of the free peoples of the world is outrageously outmanned and outgunned by the Communist Psywar battalions.

There is, however, one bright blade flashing in the United Nations camp. It is a peculiar weapon which even the gigantic, beautifully co-ordinated Communist Psywar machine cannot duplicate. Aeons old, this weapon is, curiously, not obsolete. In fact, in this era of *the big lie,* its weight may be felt more than ever before.

This weapon is *truth.*

It is of interest to note that truth is used by United Nations propagandists not only for its moral significance, but the free nations, in a clash to the finish with communism, are not only bound by the code of chivalry and the tenets of most of the religions practiced by mankind, but they use truth as a powerful offensive weapon. The Western World has finally become realistic enough to make use of all of its strengths. This is a fight to the finish! Just as United Nations infantrymen in Korea were taught to fight all out in close combat with the single mission of killing their Communist enemies, Psywar makes use of the most damaging tactic it can devise to accomplish its mission of reducing the enemy's will to fight. Happily—observers have noted upon innumerable occasions during the last seven or eight thousand years of history—truth has been one of the most effective weapons upon which man has ever stumbled. It still is!

Captain Herbert Avedon served during World War II with the 1st Ranger Battalion in Sicily and Italy, and with the Office of Strategic Services in Burma. After the war, he was a columnist and newspaper editor. Upon his recall to active duty, he was assigned as a writer-instructor at the Psychological Warfare Division, Army General School. He has also served as Assistant Projects Branch Chief with Eighth Army Psychological Warfare Division, G3 in Korea. Captain Avedon is presently serving with the Office of the Chief of Psychological Warfare, Department of the Army.

United States-United Nations Psywar, in Korea, makes use of it. Luckily it may, because, not only is it United States policy to use truth, but the political position of the free world for which it fights has everything to gain from having the truth known. Given enough time for its effects to be felt, truth will outrange, outgun, outfight falsehood any and every time. Truth is adhered to by the United Nations in Korea and the United States in other parts of the world, with never the slightest lapse, not only because it is the decent thing, but because, fortunately for us, it is the most effective Psywar weapon known.

Propaganda

The over-all, broad mission of Psywar is identical to that of the other fighting arms—to hurt the enemy. As has been stated before, Psywar is any form of action—short of the use of armed force —which serves to reduce the enemy's military or civil will to resist. Psywar endeavors to reduce the combat effectiveness of enemy troops by striking at their support of their own ground, air, and sea forces.

In warfare psychologically waged, actions, even more than words, depress the morale of an enemy. The terrifying might of United Nations fire power upon the Chinese Communist Forces and North Korean People's Army was an example of warfare psychologically waged just as well as it was an example of a shooting warfare. The devastating artillery barrages and jet-propelled air strikes affected the mind of the enemy as well as they affected his body.

But even in warfare psychologically waged, it is propaganda disseminated by the various media of mass communications —radio, newspapers, leaflets, loud-speakers, and others—which makes up the bulk of our attack. By the judicious use of propaganda—both among military and civilian target groups—Psywar attempts to reduce the productive capacity of enemy civilians, to weaken the faith of both enemy troops and civilians within their governments, to make them suspicious of other individuals and groups within their own armed forces and on their own home front. Psywar's propaganda also encourages persons within enemy territories who are friendly to the United Nations side and—when our forces occupy or liberate areas previously held by the enemy—assists in maintaining order among the civilians.

Propaganda Tactics

There are tactics in propagandizing an enemy just as there are in other forms of military assault. Army commanders look for weaknesses in the enemy's line through which to hurl their infantry and armored divisions. Psywar chiefs look for psychological weaknesses by which they may depress enemy morale. Called psychological vulnerabilities, these weaknesses are carefully evaluated and then exploited by Psywar tactics which are as different as the Trojan horse was from the buzz bomb.

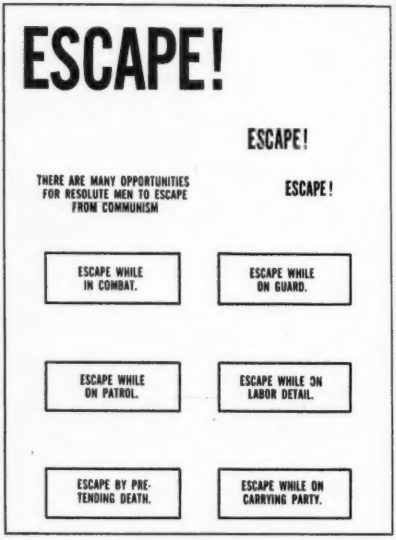
Preparation

The fact that the enemy is highly suspicious of friendly propaganda and is prone not to believe it if he is given the slightest opportunity and some coaching from his own propagandists, is a Psywar axiom. Both the opportunity to disbelieve and the coaching are always present. To offset this very natural reaction, friendly Psywar attempts to build up its own credibility which it does by making its emanations—written, vocal, and other kinds—appear plausible and eminently believable. It is normal practice to propagandize the enemy with matters he recognizes, knows, and believes, in order to gain some degree of acceptance for friendly propaganda. In other words, it is quite usual for friendly Psywar to disseminate to the enemy some of his own propaganda, some of his own

music, some of his own jokes and news; all of which will make him think things are going favorably for him, unfavorably for us, and generally this sounds very much like propaganda from his own people. This is a technique which causes the least strain on the enemy's credulity.

Propaganda is disseminated in flawless idiom and vernacular consonant with the literacy level of the target audience. Propaganda is spoken, written, and drawn with a continual awareness of pertinent cultural patterns and with emphasis upon the art forms which are most readily understood and most preferred. Again, these are the techniques which make the enemy least likely to gag on friendly propaganda as it sifts through his skull to the place it does the most good—his consciousness and, more frequently, his subconscious. For, in this fight for men's minds, Psywar is not above stimulating the enemy's temporarily dormant yearnings for security and surcease from fear—or even his repressed sexual urges. Psywar's propaganda plays on the enemy's emotions, ordering and planning their incidence, thereby controlling enemy minds to the degree necessary to impel some action favorable to our arms. Psywar may, under favorable circumstances, make the enemy nostalgic. In another situation, it may attempt to split him into ever smaller and more antagonistic groups—or to sow seeds of disaffection which grow into defection.

ORIGINAL



TRANSLATION

FIGURE 1. A SAMPLE OF ONE TYPE OF PSYCHOLOGICAL WARFARE LEAFLET USED BY THE UNITED NATIONS IN KOREA.

Once the enemy is controlled sufficiently for Psywar to be able to impel him to malinger or defect, it has won the first important battle in the war for men's minds. Psywar, then, has worked its will upon an enemy without resorting to—as is more usual in such a procedure—the shedding of blood to do it. From this point on, Psywar works on the enemy mind

until it achieves slowdowns, absences, desertions, surrenders, and even acute homesickness, and toward the end of a long war, sabotage and treason.

Psywar in Korea

Much of Psywar's effort in Korea, was devoted to letting the enemy know that the air in the world on the other side of the Bamboo Curtain was free, and unlike that pervading life under communism. This was done to a large degree by wide and continuous dissemination of news.

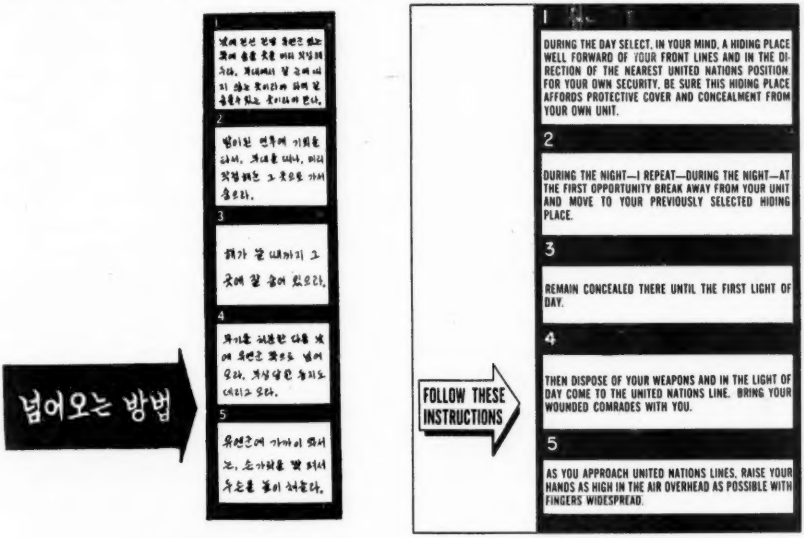


FIGURE 2. REVERSE SIDE OF LEAFLET SHOWN IN FIGURE 1 WHICH GIVES DETAILED ESCAPE INSTRUCTIONS.

Psywar Weapons

Dissemination of propaganda was accomplished through radio, leaflets and public address system broadcasts. Most glamorous of Psywar's weapons, perhaps, is radio propaganda, which was beamed at North Korean civilians and rear area troops. Programs were broadcast night and day, although our intelligence reports did not indicate the number of radios which had not been picked up by the authorities in North Korea. There was no way of determining which were in the hands of Communist officials or were retained by the rare, affluent North Korean civilian.

Friendly Psywar did not, however, underestimate the possibilities or the advantages of propagandizing hard-core Communists.

Leaflets are the propaganda workhorse. In Psywar parlance, a leaflet is any sort of written missive, from a message the size of a postage stamp, all the way up to those the size of posters—newspapers included. Enough leaflets to provide at least one for every person on earth, have been disseminated in Korea since the North Koreans crossed the 38th parallel on 25 June 1950.

Leaflets were dropped by leaflet bombs,

fused bundles, by hand, shot across the lines by leaflet artillery shells, and carried and distributed by infantry patrols.

Loud-Speakers

The other major weapon in Korea was the public address system—frequently referred to as a loud-speaker. Although designed to persuade troops to surrender when they have been cut off from their main forces, surrounded, badly shot up or without ammunition or food, ground loud-speakers were used on the radioless North Korean front to beam what amounted to radio programs to both the Chinese Communist Forces and the North Korean People's Army. Loud-speakers were also used from aircraft when a dramatic voice from the air could stimulate or control enemy movement on the ground. The best example of this use to come out of Korea was the case where a column of Communist trucks headed north in the early part of hostilities was spotted by a United Nations air observer. A voice-plane (plane with loud-speaker system and announcer) was quickly flown over the north-bound column to warn it to either turn around and head for the United Nations lines, or be shot up by fighter planes which were already zooming over the column for effect.

The voice-plane gave instructions to the column to reverse its direction as it herded the demoralized column south to the United Nations lines.

On occasion, voice- and leaflet-planes were both badly damaged by Communist antiaircraft artillery and several planes were lost.

However, casualties were not as heavy as they would have been in a war in which enemy planes fought for air superiority.

A good many of the ground loud-speakers, however, were destroyed by enemy counterfire. Indicative of the effect of ground loud-speaker propaganda on the enemy was the intensity of his fire to halt friendly broadcasts. Enemy attempts to end our broadcasts ranged from desultory rifle and machine-gun fire to heavy artillery barrages. Several rounds of mortar or artillery fire were the usual enemy response to something we said which irritated him.

There is little likelihood of learning the total effect of friendly Psywar in Korea until long after the armistice—and then only by dint of time- and money-consuming surveys by specially trained personnel. Current evaluations of the weapons of the fourth fighting arm, however, indicate they have functioned as efficiently as they could in Korea. This evaluation was the result from reports of prisoner of war interrogations and comparison with performance of Psywar media in previous wars, as well as assessment based upon successful experience in the use of the media of mass communications among civilian targets.

A New Breed of Warriors

A new breed of warriors has evolved to meet the requirements of this desperate war of ideologies. Like the specialists who are capable of dealing with such complex subjects as radar, guided missiles, and flights through the sonic barrier, this new breed must be capable of working the nation's will on the minds of men. Men in support of the older fighting arms, without touching enemy bodies, confining their effort to shielding enemy brains against enemy lies—they then reach those enemy brains with well-chosen truths. Perhaps the wars of the future will be fought less bloodily, with each day's targets to be the brains of specific groups of enemy troops, or civilians, rather than razed hills, leveled cities, or destroyed armies.

Perhaps war will then be psychologically waged rather than waged by physical destruction.

Most of today's psywarriors are soldiers first. Second, they may be either psychologists, political or social scientists, or men with wide experience in advertising, radio, and printing. In addition, there are the writers and other artists who deal in ideas who actually produce the propaganda.

All have an extensive knowledge of the psychology and mores of enemy population groups, with the knowledge among personnel of higher echelons only differing in degree from that required by the lowest.

According to an official description of his job, for instance, a front-line loudspeaker team chief, who, in Korea, was usually a corporal or a sergeant, although frequently a private first class, was as follows:

writes loud-speaker scripts and programs and broadcasts to tactical audiences in accordance with the principles of psychological warfare. Has some knowledge of history, politics, sociology, psychology, customs, traditions or culture of enemy against whom he operates, and knows something of the language and dialects of principal enemy population groups and of the media of mass communications. Has knowledge of enemy leaders, military and civilian.

Warriors of this caliber, wearing the colors of the free nations of the earth on their lance tips, were in the ranks of the fourth fighting arm in Korea dueling with the Communist propagandists and agitators.

It is entirely possible that in the future the Psywar men—unless there is another Korea, Indochina, or a similar conflagration—will do considerably more of the fighting in this strange war which shadows the earth during the second half of this century. A sober evaluation of these shadows by this writer, indicates that the war for men's minds will be waged until the first decade or two of the next century. During that time, it is believed, the world will teeter on the brink of a traditional world war many times—probably never closer to it than we have been since 1949. But time is on our side and the armaments race the free nations are now in, may not end in a bloody war.

1953-2025

The reasons for this hopeful evaluation by this writer are three, principally. The first, is that the people are well aware of the hideous cost and waste of war, and perceive now, better than ever before, that no one actually wins. They realize full well that an atomic war can end in nothing but chaos. Even the Kremlin has not the audacity to impel its people into such a war. Communism fears to put its will to the test against the will of the people which it holds in thrall. Now, the largest percentage of public opinion in the history of this war-torn world, is against the concept of settling differences by slaughtering huge population groups of which that selfsame public is a part.

Second, Communist leaders—aware that the weapons of the traditional fighting arms of the free nations soon will be heavier, more accurate, and existing in infinitely larger quantities and in better quality than those which could be summoned to support the totalitarian nations—will not start a traditional war unless they feel they can win. Right now, the Communists are not convinced they can. It is up to us to convince them that they never can. Hence, the incredibly expensive armaments race in which we must keep ahead in order to make certain the enemy does not underestimate us as our former enemies did in both world wars.

The third reason to indicate that the present armament race will not end in an Armageddon, is that our totalitarian enemies are well able, also to successfully indulge in warfare psychologically waged. They have indulged in it repeatedly, and have conquered 13 nations by the generous use of the fourth fighting arm—without serious losses among the other three fighting arms. As a matter of dismal fact, they have given evidence everywhere—except

in Korea—that they are at least as well able to make use of psychological warfare as we are. In Korea, our fourth fighting arm was locked in battle with its Psywar enemy and there it held its own and gave as good, and frequently better, than it was given.

Tactical Basis

However, in Korea, Psywar was on a tactical basis as opposed to a grand strategy of a cold or ideological global war. Tactically, we have held our own. Strategically, we are still in the process of mobilizing to fight a war for men's minds. We are engaged in fighting, not for the possession of a field of battle, but rather to deny to the enemy the use of 2½ billion human minds—those rarest, most complex treasures of this planet. Enemy psychological warfare fights to control and to direct the human minds of the earth.

Friendly Psywar

Friendly Psywar fights just as hard—not to possess these minds but to permit each mind the inalienable right to think its own thoughts—so that all people may speak and act as their minds dictate.

The free world's position, fortunately, is more acceptable to teeming humanity. Enemy Psywar has to work harder to get mankind to accept communism's unbearable thought-control. It has to lie, delude, and destroy. The free nations are luckier. *However, we must remember that our great weakness is that our Psywar has not yet fought as hard as the enemy's.*

Normalcy

Most of us who reached adulthood before 1939, have not yet recognized that there can never be a return to the normalcy of those years. We are in a fight to the finish, *now*. And the *now* is normal—the *now* of teetering on the brink of Armageddon, the *now* of fighting an enemy who freely admits he is fighting to control the world, the *now* of the awesome fight to maintain human dignity. When we—the free peoples who share this planet with those who have lost the dearest birthright of the human race, control of their own minds—realize that we are in a fight to the finish, then we may come to admit the necessity of fighting as hard for what we believe as the Communists do for what they want. Then, we will gird ourselves and fight until we win. We have started. We had best continue. This is *normalcy*—this business of fighting until death or victory. There is no other *normalcy*. The old, so-called normal world is, literally, gone forever. The new world is what we see before us now. What we can make of it by the year 2025, this writer believes, depends upon whether we win the ideological battle with warfare psychologically waged. For until then, we are embarked upon a war in which the free nations' will must be instilled on the minds of the men of the slave nations without—except in Korea, Indochina, and Malaya—using force, without shedding blood. However, although blood is not shed, and although bodies are not broken and torn, this is a more desperate war. For nations may exist today, deprived by conventional warfare of large numbers of their youth, of their military strength, and yet rebuild that strength in time. But it will be a well recognized truism that no nation may ever rebuild or even continue as that nation, if the minds of its citizens are lost to it.

This is a war in which the goals are not square miles of land or decimated armies. This is a war for the prevention of control of the entire world through the minds of men of enslaved puppet sovereignties.

A CONCEPT FOR TRANSPORTATION

Colonel Earl H. Hauschultz, *Transportation Corps*
Transportation Officer, IX Corps

The views expressed in this article are the author's and are not necessarily those of the Department of the Army or the Command and General Staff College.—The Editor.

WHEN I first learned of my assignment as a corps transportation officer, I was dismayed and disappointed. The small success I have enjoyed in my military career has been largely the result of good fortune in assignments where authority and the tools have been commensurate with the responsibility.

Corps Staff

This is not true for the transportation officer on a corps staff. He has no trucks; he has no planes or helicopters; he has no railroads or ships. Yet, he is looked to, by the corps commander, for the mobility of his troops and material, as though by the wave of the transportation officer's magic wand all these things would materialize.

System, Not Ability

In other words, my military reputation is constantly being enhanced or jeopardized—as the case may be—by the efforts and efficiencies of people over whom I have not one iota of control. I am at the mercy of a *transportation system*, good or bad, and my ability, in the eyes of the corps commander, fluctuates accordingly.

But, there is one advantage to me in this assignment which probably outweighs all the bad things. I am in the position of the man in a house by the side of the road. I can watch the transportation support effort on the one hand and observe its strength or weaknesses as evidenced by the reaction of our customers on the end of the supply pipe line.

Major Considerations

There are mainly three points on which our operations are judged by our customers. When I use the word customer, I refer to the final consignee, the front-line unit, and not the supply services.

Dependability

The first and most important point is dependability. If delivery of goods, equipment and personnel was *always* made at the right time and the right place to the right person, we would soon enjoy a confidence that would eventually save an inconceivable dollar investment in equipment, personnel, and organization.

For example, why does the infantry regimental commander want his own

A corps transportation officer—not unlike other staff officers—often finds himself in the position of having a mission without the requisite tools which are essential for the achievement of that mission

trucks? Because, he is suspicious of our ability to support him when the chips are down.

Why does every staff section want an assigned vehicle? Because, by sad experience they know every time they call the motor pool, all the jeeps are out.

Why do the supply services cling to an outmoded system of depots stocked to the eaves on every piece of hardstand they can find? Because, we have never proved infallible in delivery.

It seems to me that only acts of God and war should interfere with that infallibility.

Speed

The second point, which is associated with dependability, is speed. In spite of the wonderful advances in modes of transportation over the last century, we have shackled ourselves to outmoded handling and administrative procedures, which to a large extent have nullified our ability to make fast delivery except as an emergency measure. It is true that in this respect we find ourselves irrevocably tied to and hampered by the idiosyncracies of the supply services.

Colonel Earl H. Hauschultz is a graduate of Ripon College, Ripon, Wisconsin. He entered the service in 1933. He served as Chief, Military Science and Tactics Department, the Transportation School, Fort Eustis, Virginia, prior to assuming the duties of IX Corps Transportation Officer in Korea in July 1953.

However, we must not let that be an excuse behind which to hide. Perhaps if the combination of speed and dependability were proved by experience, our associates in the supply business would voluntarily readjust their activities.

Safe Delivery

My third point is still associated with dependability—safe delivery. How many times have you personally experienced damage or loss by entrusting your possessions to the tender vagaries of shipment, or know of someone who has?

On these three points I make this observation—dependability, speed, and safe delivery are not obtained without sacrifice of sleep and personal comfort on our part. We, ourselves, must be mentally dependable, accurate, and fast to obtain those qualities in our product.

The concept for transportation I want to leave with you is one where the shipper puts his goods into our system at one end and it arrives safely and soundly in the customers hands on an accurately predicted date.

Fast, safe, dependable service is what we *must* give. Such service is *all* we have to sell.

When we achieve 100 percent performance against these criteria, the corps transportation officer will be able to relax in a feeling of safety for his reputation and pride in his function.

AUTHORS

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MILITARY NOTES AROUND THE WORLD

UNITED STATES

Improved C Ration

Chop suey with meat, pound cake, and oatmeal cookies are included in the new version of the C ration recently ordered by the Army. The ration will be packed in a flatter, more rectangular package, making it easier for troops in the field to carry. In addition to the basic items of the present menu, the new ration will include beef and peas with gravy, chop suey with meat, ham and potatoes, fruit and pound cake, oatmeal cookies, soup and gravy base, and soluble tea.—News release.

Training Cost

To train, equip, and maintain a soldier for a 2-year period costs the Army about $11,000. This figure does not include capital costs or costs of major construction and equipment. During the first year, it costs $5,800 to induct, transport, equip, train, feed, clothe, and pay each new inductee. Each year thereafter costs $5,200 for each enlisted man.

The average yearly cost breaks down as follows: pay—$1,943; food—$466; clothing—$58; travel (permanent change of station)—$130; morale and welfare—$10; individual equipment—$102; and maintenance and operations attributable to the individual soldier on per capita basis—$2,500.—News release.

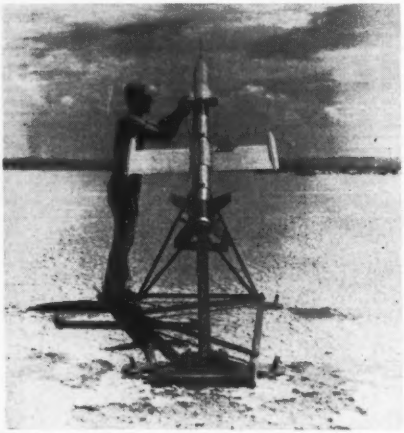
Jet Helicopter

The *HJ-1 Hornet* is the Army's first operational ram jet helicopter and can be used for liaison, wire laying, reconnaissance, aerial photography, and other miscellaneous missions now normally accomplished with jeeps. In the Army, the plane will be known as the *H-32*, while in the Navy, it will be designated the *HOE*. It is a 2-place, rotary wing aircraft with 23-foot rotor blades driven by small ram jet engines located at the blade tips. The power plants have no moving parts and the engines can be changed in a matter of minutes with no other tool than a screwdriver. Not scheduled for production presently, it is being delivered in small numbers, only.—News release.

Army's first ram jet helicopter, the *H-32*.

Wing Research

A rocket-driven device has been developed to provide supersonic testing of scale models of wing designs for aircraft of the future. The model wing is mounted



Rocket tests scale models of wing designs.

on an ordinary 5-inch high-velocity combat rocket and electronic instruments packed in the "rocket laboratory" radio back to the ground a report of the wing's behavior at speeds about twice supersonic. —News release.

Actuarial Tables

By using actuarial tables in estimating the life expectancy of aircraft engines, the Air Force claims that it can accurately forecast all its engine needs. The system has proved so successful that plans are being made to extend it to accessories and other equipment. The Air Force tables are similar to those employed by life insurance companies and show the rate of failure of an aircraft engine according to its age. Data will be compiled monthly from the various Air Force bases. Once the system is firmly established, it is estimated that millions of dollars will be saved.—News release.

Stabilized Tours

Under normal conditions, all top-three graders with 20 years or more service, who have completed an oversea tour of duty since 1 January 1950, will be assigned within the United States for the duration of their Army career, under a new policy recently announced. They may volunteer for oversea service or in the event of war, the stabilized tour would end. There are approximately 7,000 men in this category and the Army is anxious to keep their valuable experience and know-how on duty.—News release.

Combat Training

More emphasis is being placed on weapons and tactical training, with a minimum essential being devoted to "general" subjects, in the new 8-week Basic Combat Training Program of the Army. The number of hours of instruction have been increased in Individual Day and Night Training, Marches and Bivouacs, Weapons Qualification (*M1* Rifle), and Signal Communications. Two new subjects added are Battle Indoctrination Combat in Cities, and Night Firing and Night Vision.

Employment of the Armed Forces, Casualty Reporting, Cold Weather Indoctrination, and Psychological Warfare are subjects of a general nature eliminated from the program. The number of hours of training in the following subjects has been reduced: Achievements and Traditions of the Army, Character Guidance, Military Justice, and Maintenance and Supply Economy.

Emphasis is placed on practical work rather than theoretical instruction and lectures and conferences are used to a minimum. The objective of the program, given to newly enlisted men without previous military training, is to produce a confident, alert, and physically-fit soldier trained in basic military subjects and the fundamentals of basic infantry combat.—*Report to the Army.*

Increased Fire Power

Each firing battery in both the light and medium howitzer battalions of the division artillery of the Airborne Division will now have six howitzer sections, an increase of two over their previous organization. An additional lieutenant, who will serve as assistant executive officer, has been added to each firing battery in both light and medium battalions. Division artillery headquarters has been authorized two Army aviator officers and two chaplains under the new organization.—*Report to the Army.*

Lighter Foot Locker

A new foot locker made of glass and cellulose fibers and polyester resin is being tested by the Quartermaster Corps. Although lighter than the wooden one now in use, it is said to be more durable. Designed for easy stacking and handling, it requires no nails or metal corners, and is equipped with a rubber seal around the lip of the lid to protect its contents.—News release.

Nonmagnetic Ships

As an answer to the magnetic mine which proved so deadly to shipping during World War II, the United States has developed nonmagnetic minesweepers to clear the sea lanes in the future. Regular iron-hulled ships are like big permanent magnets as they become magnetized to various degrees while being built.

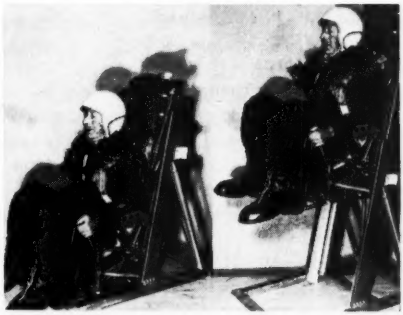
The nonmagnetic minesweepers are especially designed to have no mine-triggering magnetic field. The new ships have a laminated wooden hull and many of them contain secret electronic weapons, presumably to detect magnetic mines. Iron is conspicious by its absence in the new ships. The wooden hulls are fastened with bronze or aluminum nails unaffected by magnetism. Nonmagnetic engines are being constructed to power the ships.—*Science News Letter.*

Antiaircraft Gun

An antiaircraft gun, that spits shell fragments into the sky much faster than the guns effectively used during World War II, has been developed for use on Navy ships. Two of the new guns, firing .50 caliber shells equipped with proximity fuzes that wreak havoc when within target range, are combined into a hard-hitting team. They can be controlled electronically by the ship's radar and fire control system, or they can be aimed and fired independently from the gun captain's seat on the mount. The gun gives several times more fire power than the old one and should prove effective protection against guided missiles.—News release.

Automatic Ejection Seat

Telescoping guide rails steer the pilot's seat well above the cockpit sill and give it a high trajectory after ejection in a newly developed safety mechanism for jet



Telescoping guide rails aid pilot escape.

aircraft. The ejection propellant is activated by squeezing a lever on the right side of the seat. The elbows are kept in padded arm rests and the feet in special heel slots when the propellant is activated. The telescoping rails extend and lock about 2 feet above the stationary track. The ejected seat, thus, gains additional clearance over the airplane in flight.—News release.

Bombing Accuracy

Manual pip control kits, which are an adaptation to the automatic computing electronic gun sight, are expected to increase accuracy of jet fighter-bombers by 50 percent. The electronic gun sight is very accurate in air-to-air work and rocketry, so the new kit does not function in this type of mission.

If the pilot begins his dive at 12,000 feet, he has about 3 seconds in which to correct the sight. The new adaptation allows the pilot to make fast manual adjustments early in the dive run for any changes in factors he estimated before beginning his dive. The electronic sight was often inefficient in adjusting at high speeds.

The manual pip control gives the pilot a caged sight. In the electronic sight, the pipper sometimes disappeared from pilot view when the jet swerved from preset run conditions to meet some unforeseen factor.—News release.

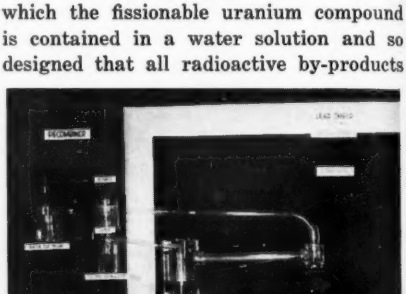
Study Uniform

The Army is turning to the field in its efforts to select a general wear uniform of distinctive and dignified military design, of acceptable color, which will reflect Army tradition, be suitable for different climatic conditions, and be fitted carefully to the individual.

Officers and enlisted men of all ranks will be asked to voice their opinions in a survey being conducted. This personnel will be shown models of a green-gray uniform tested last year by the 3d Infantry Regiment; a dark green coat and "pinks" which were presented to Congress last year; and the OD uniform with Eisenhower jacket. They will also be asked if they feel that the present uniform is satisfactory. This survey will not include combat uniforms with which the Army is felt to be generally satisfied.—News release.

'Percolating Tea Kettle'

A powerful "percolating tea kettle" or water boiler type atomic energy reactor for special nuclear research has been developed for the Atomic Energy Commission. The self-contained unit is one in which the fissionable uranium compound is contained in a water solution and so designed that all radioactive by-products



Water boiler type atomic energy reactor.

of the fission process are retained in the unit instead of being exhausted and mixed with the open air. The reactor is capable of developing 100 watts of power and can run for as long as 10 years without refueling.—News release.

Domestic Aluminum

Progress in its search for a practical method of separating the aluminum from the silica with which it is combined has been reported by the Bureau of Mines. Enemy submarine activity made the importation of bauxite, the only practical aluminum ore, extremely hazardous during the last war. There is an abundant supply of aluminum underground in this country but the problem has been to find a practical method of producing it.—News release.

Carrier Jet

A thin wing and fin tail will feature a new version of the *FJ* carrier-based fighter series ordered recently by the Navy. The plane will be powered by a *J-65 Sapphire* jet engine which will enable it to fly at speeds above 650 miles an hour. Other details of the design of the *FJ-4*, the new plane, are still classified, however.—News release.

Speedy Repair

A jeep fully outfitted with a compact package of test equipment and spare components which enables damaged gun sights on jet fighters to be put back in working order six times faster than old methods has been developed by the Air Matériel Command. The jeep is not a repair shop as its job is to get the sight working again by locating the damaged component and replacing it. With the use of the jeep, the plane does not have to go to

Outfitted jeep speeds gun sight repairs.

the base armament area to have its sights checked—a task which usually requires several hours, can now be done in about 20 minutes. It also enables the exhaustive pre-flight checks required daily to ensure that the delicate sights are in top operating condition to be accomplished with fewer personnel in a fraction of the time required previously according to the report.—News release.

Sabre Trainer

The newest jet trainer is the *TF-86*, a 2-place version of the combat-proved *F-86 Sabre Jet*. It is designed for advanced pilot training in high speed flying, gunnery, and dive bombing. It is very similar to the *F-86F* fighter-bomber, with modifications including two cockpits, dual controls, and dual instrument panels. The trainer has a speed of over 650 miles an hour, a service ceiling of 45,000 feet, and a combat radius of 600 miles. Provision has been made for the installation of two .50 caliber machine guns for gunnery practice.—News release.

***TF-86* designed for advanced pilot training.**

Expenditures

Of the 15 billion dollars which the Army expects to spend this fiscal year, about 5 billion will be spent for procurement and maintenance of a production base capable of producing weapons and associated combat equipment. A similar amount will go for pay, allowances, clothing, and travel of its personnel. About 4 billion dollars is being spent for maintenance and operations. The Army expects to spend 400 million dollars for research and development. A similar amount is planned for military construction and public works, and 300 million will go to the reserve components. The remainder will be spent on miscellaneous items.—News release.

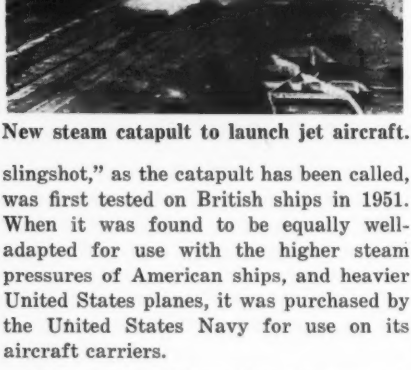
GREAT BRITAIN

Antiaircraft Defense

Long-range plans for the integration of guided missiles into the country's antiaircraft system have been indicated by recent changes in Britain's air defenses. Responsibility for the defense of strategic or industrial targets is expected to be shifted to guided missile units when feasible. This is indicated by the reduction in the number of heavy antiaircraft artillery units and increases in lighter units attached to field forces.—News release.

Steam Catapult

The United States Navy has begun tests with a British designed steam catapult, the *BS4-U*, for launching jet aircraft, which it recently purchased. The "steam



New steam catapult to launch jet aircraft.

slingshot," as the catapult has been called, was first tested on British ships in 1951. When it was found to be equally well-adapted for use with the higher steam pressures of American ships, and heavier United States planes, it was purchased by the United States Navy for use on its aircraft carriers.

It is capable of launching the most advanced type of jet aircraft, even when the carrier is headed down-wind, or is stationary, thus eliminating the necessity of the vessel having to steam into the wind for lengthy periods.—News release.

Carrier Helicopter

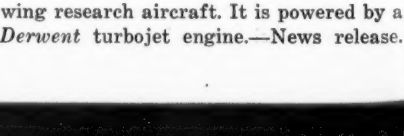
Successful trials at sea aboard the Royal Navy's largest aircraft carrier, the *HMS Eagle*, were recently conducted with the *173 Mark 1* helicopter. The purpose of

Large-size helicopter tested on carrier.

the tests was to study the behavior of large-size helicopters in varying conditions of deck motion; to carry out tests of rotor blade behavior; to determine the ease of maneuverability on the flight deck; and to examine stowage problems below decks.—British Information Services.

Delta-Wing Trainer

The first delta-wing trainer aircraft, the *Avro 707C*, recently completed its first flight. Designed to assist pilots in familiarization with the delta-wing, it is a dual control version of the *Avro 707* delta-



***Avro 707C* delta-wing trainer in flight.**

wing research aircraft. It is powered by a *Derwent* turbojet engine.—News release.

BOLIVIA

Rail Link

When the first rail link between Brazil and Bolivia is officially opened, the train crews will be armed because of attacks by the savage Yanaiguas Indians, who inhabit the jungle region through which the railroad runs. Each time a train comes along the newly constructed line, it is met with a shower of arrows as the railroad is the Indians' first contact with civilization.—News release.

AUSTRIA

Air Sovereignty

Austria intends to make her own arrangements with foreign aircraft companies for flights over her territory according to a note forwarded to the Allied Council by the Austrian Government. Soviet occupation authorities have insisted that Austria be prohibited from all civil aviation activities that go beyond mere planning. The Austrian Government has interpreted this prohibition to apply only to the establishing of Austrian air service and not to any official activity which merely serves to facilitate and support air services under foreign flags over Austrian territory, especially when those are conducted for a profit.—*The New York Times.*

TIBET

'Autonomous Government'

The formation of a 5-country "Tibetan Autonomous Government" in western China "under the leadership of the Communist Party of China and the People's Government of a higher level," was recently announced by Communist China. The seat of the government is to be in the Hainan region of Tsinghai Province. This announcement follows by 3 years the invasion of Tibet by Chinese Communist troops, which was the most recent attempt by foreign nations to rule the mountain kingdom in central Asia.—News release.

AUSTRALIA

Firefly Trainer

The *Firefly T.Mk.5*, 2-seat trainer developed in Australia, is a new version of this multipurpose naval aircraft. The most apparent modification is a raised

Two-seat trainer version of the *Firefly*.

cockpit for the instructor, complete with dual flying controls, in place of the standard observer's cockpit. This arrangement permits an excellent view "over the shoulder" of the pupil, especially for deck-landing instruction, without any adverse effect on performance. The plane has a top speed of 360 miles an hour and a range of about 5½ hours.—British Information Services.

Uranium Find

The richest form of uranium, consisting of black pitchblende and containing 70 percent or more of uranium oxide, has recently been found in Wild Dog Valley, 40 miles from Adelaide, capital of South Australia. It is the first discovery of this form of uranium in Australia and was found on the surface of the ground.—News release.

BULGARIA

Economic Development

A 5-year plan running through 1957, for economic development, was recently announced by the Government of Bulgaria. This is Bulgaria's second 5-year plan.—News release.

FRANCE

Versatile Jet

The French Air Force has placed an order for various types of the *SO 4050 Vautour* twin-jet combat aircraft. It can be produced as a single-seat tactical support aircraft, an all-weather fighter with crew of two in tandem, a light bomber with bomb-sighting position in the nose,

Fighter-bomber version of *SO 4050 Vautour*.

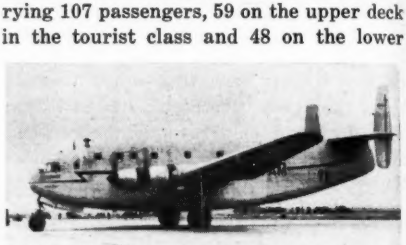
and a photographic reconnaissance plane.

Designed to keep pace with turbojet techniques, the *Vautour* may be equipped easily with most of the jet units of the axial flow type now being produced or developed. The position of the engine nacelles, which are "stuck" under the wings instead of being "buried" in them, facilitates the substitution of one jet unit for another. Provisions are made for afterburners or jet deviators, also.

It is the lightest of all bombers but can carry an atomic weapon for more than 1,242 miles. It has a speed greater than that of other existing bombers and is practically invulnerable to the most recent fighters. The plane can takeoff and land with a normal load on runways measuring less than 2,625 feet. At low altitudes, the horizontal speed varies over and above 683 miles an hour depending on the jet units used. The fuel system is arranged so that a direct hit on one tank would not cause loss of more than 20 percent of the fuel feeding one jet unit.—News release.

Double-Decker Plane

The *Breguet 763 Provence* is a double-decked, 4-motor monoplane capable of carrying 107 passengers, 59 on the upper deck in the tourist class and 48 on the lower

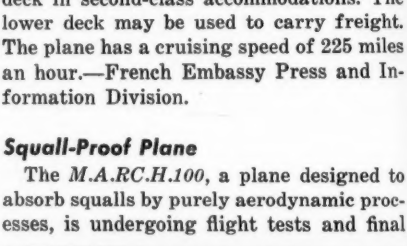


***Breguet 763 Provence* is a double-decker.**

deck in second-class accommodations. The lower deck may be used to carry freight. The plane has a cruising speed of 225 miles an hour.—French Embassy Press and Information Division.

Squall-Proof Plane

The *M.A.RC.H.100*, a plane designed to absorb squalls by purely aerodynamic processes, is undergoing flight tests and final



Squall-proof plane now undergoing tests.

adjustments in France. Technical details are not available but it is a 3-seater, twin-engine plane. Its two 90-horsepower engines give it a cruising speed of 185 miles an hour and a range of 5½ hours.—News release.

SWITZERLAND

Rocket-Powered Fighter

The Soviets' new rocket-powered fighter can stay in the air no longer than 7 minutes according to Swiss aviation experts. The plane is said to be a combat version of the experimental German *DFS 346* and can climb at a rate of about 350 feet a second and its normal speed is estimated at between 700 and 800 miles an hour.

The pilot of the 4-ton plane lies face-downward in a pressurized cabin, with his head supported by a chin strap. The armament is believed to consist of 37-mm cannon and possibly 3-inch air-to-air rockets. Its role is to intercept enemy planes and to protect the Soviets' vital points.—News release.

SOUTH AFRICA

Military Academy

To make the academic training in the three branches of the Union of South Africa's Defense Force more efficient and economic, a military academy for training officers for the Union's armed forces is being erected at Saldana Bay near Cape Town. Presently, the Army's academic training is given at Voortrekker Hoogte and Pretoria University; the Navy's academic training is given at Natal University; and Marine training is at Saldana Bay under Pretoria University. The three preparatory schools operated by the services will continue to function and all matriculated youths must pass a 1-year course at one of the schools before taking a 3-year course at the academy.—News release.

GREECE

Decimal System

The *meter* and *kilo* will replace the *pic* and *oke*, survivals from the days of Ottoman domination and in general use in Greece today, if Government sponsored legislation is successful in establishing the decimal system in weights and measures in the country.—News release.

USSR

Ease Travel

Passengers traveling between the Soviet Union and adjoining European countries will no longer have to change trains at border stations, because of the narrower gauge of European railway tracks, it was announced recently. Special cars which can be adjusted to either gauge will now be attached to trains on the international run.—News release.

Typesetting Machine

Soviet engineers have constructed an experimental typesetting machine with 2,025 keys, instead of the usual 90, for printing in the Chinese language, the Soviet news agency Tass recently announced. The characters most frequently used are arranged in front of the printer's seat, with the others on the sides. Tass also reported that another machine has been developed which would be suitable for newspaper work. This machine has 250 keys but through the use of shift levers, each key can produce 8 different characters, so that 2,000 characters in all can be printed according to the agency.—News release.

Ship Gold

Shipments of over 100 million dollars worth of gold have recently arrived in London from the Soviet Union which is estimated to have the second largest gold reserve, after the United States. The reasons for the large shipments were not immediately apparent although it was felt that the Soviets might be attempting to shift the pattern of world trade. The sterling balance with which Moscow financed its purchases of raw materials from sterling areas has declined and in order to increase foreign exchange, so urgently needed to support Soviet economy, it has been found advantageous to sell the gold in "official" markets at fixed prices. Until recently, "free" market prices were more favorable.—News release.

WESTERN GERMANY

Atomic Study

Plans are being made to establish Western Germany's first postwar nuclear research center in the outskirts of Munich, Bavaria. Allied occupation provisions forbid nuclear research by the Germans but once the Bonn peace contracts are ratified and implemented and German sovereignty is restored, work will begin. The institute would concentrate on research and the production of isotopes for medical purposes.—News release.

NORWAY

Civil Defense

As part of Norway's national civil defense program, Oslo is about to start work on another underground bomb shelter and three more will get underway shortly. The city is required to provide refuge for 20 percent of its 470,000 population and so far accommodations for 45,000 are under construction or preparation. Half of the civilians will be protected in caves blasted out of solid rock. In peacetime, these shelters will serve as garages.

Separate shelters, accommodating about 300 persons each, are being constructed for civil defense wardens and workers. Already 21 of these alarm stations have been completed and 6 more are expected to be finished this year. Motor vehicles and equipment will also be housed in these centers. All but 1,000 of the city's required 13,000 civil defense workers have now been trained. An ultramodern, air conditioned headquarters center providing the latest intercommunication facilities with all alarm centers in the city and certain command stations elsewhere is now ready for use.—News release.

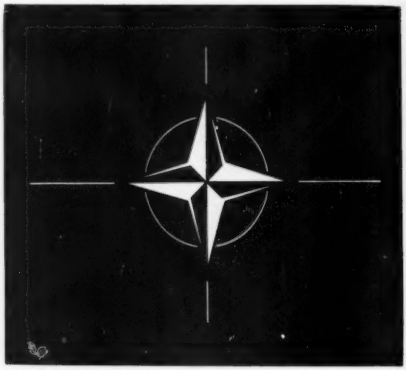
Bofors 48

According to reports, production has been started on the new *Bofors* model *48* lightweight antiaircraft gun which fires 240 rounds a minute.—News release.

NORTH ATLANTIC TREATY NATIONS

NATO Emblem

The official North Atlantic Treaty Organization flag will be an emblem in white on a navy blue background. The design of the emblem is a 4-pointed star



NATO flag has white on navy blue colors.

representing, according to the Secretary General of NATO, "the compass that keeps us on the right road, the path of peace, and a circle representing the unity that binds together the 14 countries of NATO."—News release.

Lightweight Cartridge

As the result of extensive tests and close co-operation between Belgium, Canada, France, the United Kingdom, and the United States, these five countries of NATO are prepared to adopt as standard small arms ammunition, the new .30 caliber (7.62-mm) lightweight cartridge developed by the United States. The decision to adopt the new ammunition was based primarily on the over-all problem of retooling requirements and weapons production facilities in each country concerned. NATO has accepted this new ammunition as standard for its use. Other NATO nations have been invited to adopt the new ammunition.—News release.

FOREIGN MILITARY DIGESTS

Mobile or Defensive Warfare?

Translated and digested by the MILITARY REVIEW from an article by Lieutenant Colonel F. O. Miksche in "Revue de Defense Nationale" (France) August-September 1953.

FEW things are as difficult as an accurate analysis of the experiences of war. No one battle is like any other: each engagement is conducted under conditions peculiar to that action alone. Matériel, geographic, and moral factors never being identical, there can be no fixed tactical ideal. In 1940, the Germans possessed superiority of matériel and morale. Four years later, in Normandy, they were fighting without air support, and no longer looked forward to final victory.

The strategic conditions in the Soviet Union differed completely from those in Western Europe. The tactics that could succeed there were not assured of success in another theater of operations. The conflict in Korea, similarly, had its own peculiar characteristics. Only battles in which the adversaries were equal from the physical standpoint, and from those of matériel and morale, would make it possible for definite conclusions to be drawn.

Technical progress provides new weapons which naturally lead to other forms of combat. Depending upon the matériel at its disposal—weapons, means of transportation, means of signal communication—each era has perfected its particular tactics. The reciprocal relationships which exist between fire power and capacity for movement exercise a decisive influence on the transformation of tactical methods—in other words, on the reciprocal relationships between attack and defense.

Artillery

Before the invention of armored combat vehicles, the difficulty of moving cannon constituted the dominating factor. It rendered movement practically impossible and the front gradually solidified into a condition of trench warfare. To paralyze the fire power of the defense, the attack was obliged to bring up great masses of artillery. "The artillery conquers the terrain and the infantry no longer has anything to do but to occupy it,"—according to the concept attributed to Marshal Henri Philippe Pétain. This resulted in the battle of

attrition (1915-18) on extended fronts in which the adversaries fought ferociously on narrow strips of terrain.

Tactics Defeat Strategy

The field of battle found itself divided into sectors and objectives—0-1, 0-2, 0-3, and so on—within which the units concerned—divisions, regiments, or battalions—were shoved about from one square to the other like the men of a game of chess. The nature of the matériel employed forced the attack to operate in the main, frontally, on broad sectors. It was rarely possible to do more than make an indentation in the enemy front. The enemy reserves, which were hastily brought forward, quickly re-established the situation. There was rarely a penetration, and never a decisive result. As a consequence, General Erich Wilhelm Ludendorff, adversary of Pétain, declared, "My strategy has been conquered by tactics!"

Principal Causes

The principal causes of this situation were:

1. The slowness of the transportation means employed between the rear and the combat zone—railroads and horse-drawn vehicles—did not permit one to rapidly realize the superiority of means necessary for an offensive. Preparations, at times, lasted for a period of several weeks, and could not escape the notice of the defense. Therefore, there was an absence of surprise.

2. The necessity for exploiting fully the range of the supporting artillery and of pushing it as far forward as possible, while the primitive characteristics of the transportation means prevented organization in depth of the ammunition supply. These factors contributed to the deployment in width of the forces which were to be employed.

3. The obligation, once the first zone had been carried by storm, to push forward, at least, a part of the artillery. The execution of this maneuver required the mopping up of the terrain which had been conquered by the reserves, at all points where the enemy resistance was strongest. These were reasons why attacks on relatively extended fronts became normal, while an engagement on a narrow front was considered dangerous because the flanks were, thereby, threatened.

4. The insufficiency of signal communication means exercised an influence which was, by no means, negligible. The telephone wire which connected the forces of the attacker at a centralized point, did not permit the co-ordination of combat between isolated groups. It was necessary to give detailed orders a long time in advance. During the battle, it was difficult to change orders already put into execution, to say nothing of the fact that, with primitive means of transportation, it would have been too complicated and too slow to modify anything whatsoever of the planned course of the operation.

Organization of Defense

In order to meet these methods of attack, the defense organized itself in depth in successive strips of terrain or zones, before which the enemy advance was broken. During World War I, the opposing armies were more or less on an equal footing from the standpoint of matériel and morale.

World War II

A tactical evolution occurred in World War II which may be divided into two phases—the *blitzkrieg* period, and later, the reply to the *blitzkrieg*.

The *Blitzkrieg*

In the first, the Germans, inspired with the ideas of two Englishmen, Captain Basil H. Liddell Hart and Major General J. F. C. Fuller, put into operation a tactical system which exploited the possibili-

ties presented by a proper combination of modern matériel—armored combat vehicles, and motorized transportation. With air support, the tanks were able to break through easily what in World War I would have been impenetrable lines.

The dominating characteristics of this form of tactics are:

1. General motorization of the armies, and the organization of armored divisions, which permitted rapid concentration of forces in those sectors of the battle front where the decision was being sought. Those units which, from distant bases, had been brought to the scene of action, passed without delay from the approach march to the attack. The divisions which were destined for the breakthrough and for the pursuit appeared successively on the field of battle at the moment when it was judged their intervention was required. This sudden appearance before the enemy positions, together with the surprise attending it, added to the successful chances for an attack.

2. The reduction of the attack front. On a front of around 15 or 16 miles, the enemy positions were usually attacked at two points of strong effort. This effort, called the *Schwerpunkte*, was about 3 to 5 miles in width, while the intervening line was subjected to a powerful frontal pressure. Instead of being manifested over broad fronts, superiority was purely local at the *Schwerpunkte*, and the local defense, surprised and overrun by superior numbers, was reduced to powerlessness.

The systematic organization of this crushing local superiority, was an important condition of success. No longer need reserves be engaged in those sectors where advance had been stopped, but only in those places where the attack had most easily gained ground, thus following the line of least resistance.

3. After an artillery preparation of short duration—or no preparation—the attack was simply launched with armored vehicles, supported by aviation, and followed by a little infantry. Squadrons of dive bombers neutralized the enemy battery positions and other defensive installations that held up the advance. And what was still more important: the aviation cut the route to the breakthrough sector for the reserves of the defense. With the zone of battle thus isolated by air power, it was possible for the attacker to maintain the local superiority assured him by the sudden concentration of his forces on the ground while the air force protected the flanks of the narrow breakthrough.

4. Radio communication which facilitated co-operation between the groupments fighting in an isolated fashion. Continuity of the front line no longer being necessary, one was able to bypass certain resistance complacently. Thanks to motorization and to radio communication, it was relatively easy during combat, to change the original plan of maneuver, and to direct the operation by means of successive orders. The fighting spread in the two dimensions of width and depth on the surface, while aviation added a third dimension to the battle—height.

German Success

It is to these tactics that the Germans owed their success in the first half of the war. Instead of fighting for days for the capture of a limited amount of terrain, their tanks split open the successive zones of resistance like wedges in the space of a few hours' time. The reserves, brought up in haste by the defense, were not able, the majority of the times, to arrive until after the breakthrough or without having to withstand a rough pounding from the air. The allied tactical doctrine based on a speed of 2.5 to 3 miles an hour—the speed of a person on foot—could not hold its own in the face of situations which evolved four or five times more rapidly. The breakthrough at Sedan had as its re-

sult the encirclement of the allied armies with their backs to a natural obstacle—the coast of the English Channel.

In the battles which followed in the Soviet Union, the Germans at times created two strategic centers of strong effort 140 to 155 miles apart, between which the tanks pushed their way like wedges, crushing entire Soviet armies like giant pincers. The encirclement battles of Briansk, Vyasma, and others were characteristic of this period. In France, the tanks operated by divisions, in the Soviet Union—by corps, and later, by entire armies.

The Second Phase

In the second period, the defense, after long trials, succeeded in putting new weapons into operation and in creating a new doctrine. The battles of El Alamein and Stalingrad marked not only a turning point in the fortune of war, but a revolution in the domain of tactical methods.

The countermeasures taken against the *blitzkrieg* were of two types:

1. The technical type—the troops were equipped with powerful antitank pieces—bazookas, and mines. It appeared as though, in the perpetual war between armor and the projectile, the latter had, once again, gained ascendancy.

2. The tactical type—decentralization of the defense. Organized for all-around defense, its task was no longer that of halting the enemy frontally, but of channelizing him between points of resistance in such a way as to facilitate the counterattacks. Reverse slopes were sought in order to protect the troops of the defense against artillery. All-around defense was counted on for forcing the enemy to undertake costly infantry attacks and for cutting to pieces and destroying the elements which might have filtered in by means of counterattacks. This new defense plan was based on movement.

Comparisons

We have no proof that these technical and tactical countermeasures would have succeeded in slowing down the pace of the *blitzkrieg*. The armies facing one another, either in the first or the second phase of the war, were not on the same level either from the physical or moral standpoint. The Germans, who were recognized as masters in the matter of attack prior to 1942, had less success in defense, a circumstance explainable in large measure by their weakness in the number of forces and the equipment necessary for counteroffense.

At the same time, like the allies in 1940, they were passing through a doctrinal crisis, the solution of which they failed to find during the war. On both sides, the massed engagement of armored divisions in breakthrough battles was practiced less and less. More and more frequently, battalions of tanks were employed in the support of infantry. On the allied side, powerful artillery preparations again preceded the attacks of the infantry divisions.

The armored divisions had the mission of pursuit to the limit, after the first breakthrough—a method the more remarkable in view of the fact that the allies possessed, at this time, absolute supremacy in the air. The Germans, on the other hand, had been practically without air support since 1943, and because of the absurd strategy of Hitler, they had had no strategic reserve at their disposal in the East which would have permitted them to combine strategic defense and counteroffense. After 1943, they lacked air supremacy, even in the East. What would have happened in the Soviet Union if the German Supreme Command had been able to launch a new counteroffensive with about 30 divisions supported by 2,000 planes?

At the time of the landings in Normandy on 6 June 1944, the German reply was only 70, as opposed to 10,585 allied air sorties. What would have been the situation if Göring's *Luftwaffe*, that day and

during the weeks which followed, had been able to place at least one plane in the air against three? Would the landings in Normandy and the spectacular campaign of General George S. Patton have been possible?

The Future

However, the future, more than the past, interests us. What tactical form would a war assume between adversaries who were virtually equal in point of view of matériel and morale? What would be the respective relations between the fundamental elements of combat—fire and movement?

In World War I, fire paralyzed movement. In the first half of World War II, the combined employment of armor and aviation resulted in the breaking open of fronts regarded as invulnerable. Since that time, new tactical methods and new weapons have singularly reduced the capacity of tanks for maneuver. Of the two weapons: tank and aviation, it is certainly aviation which is influencing tactical methods most profoundly. Theoretically, war of movement may still be imagined without tanks—but not without aviation. It can be presumed that mobility in battle can still be achieved provided the forces on the ground have at their disposal a superior air support.

But what would happen if some day a really efficacious weapon against the plane were perfected? Would that spell the condemnation of large scale offensives pushing forward to depths of several hundreds of miles? Would new methods of combat be derived from it—struggles on widely extended fronts—comparable to the battles of attrition of World War I? The closer the balance between fire and movement, the less room there is left for maneuver.

Conclusion

How can movement by air be prevented? The technicians, thus far, have not solved this problem. The constantly increasing speed of the plane renders co-operation between the air and the ground still more of a problem. Long columns of marching ground forces still present easy targets to attacking aviation. The same cannot be said, however, if the targets are small or well camouflaged. Low-flying jet aircraft see almost nothing on the ground and those flying high have a great deal of difficulty in attaining accuracy. With increasing speed, flexibility of maneuver becomes more and more difficult; the strain on the pilot's nerves increases; the possibilities of contact with the ground become more complicated. However, in a sky dominated by jet aircraft, aviation that is slow in its movements cannot operate with success.

However it may be, it is risky to prophesy, but an evolution, such as that just indicated, could exert a profound influence on future forms of battle.

No war was ever won by remaining on the defensive and so we have emphasized the Army's need to move swiftly and devastatingly against an enemy. In any future war, air mobility will play a major role. Because of advances in air movement, we have the potential of moving faster and farther and can hit an enemy with greater surprise than ever before. This increased mobility is multiplying our potential effectiveness both in airborne assault operations and in the strategic movement of troops over great distances.

General J. Lawton Collins (Ret.)

National Security of the Philippines

Digested by the MILITARY REVIEW from an article by Lieutenant Colonel Deogracias Caballero in the "Philippine Armed Forces Journal" April 1953.

THE constitution of the Philippines, promulgated under the assumption that our country was going to be a sovereign state, gave expression to the aspiration of the Filipino people to "secure to themselves and their posterity the blessings of independence under a regime of justice, liberty, and democracy." Toward this end, this same constitution provides that "defense of the state is a prime duty of government and in the fulfillment of this duty, all citizens may be required by law to render personal, military, or civil service."

Self Reliance

The first law passed by the government under this constitution was the National Defense Act. President Manuel Quezon secured advice on defense matters from top-flight American military minds. Having obtained that, a defense structure that was supportable by the national economy and at the same time designed to provide a realistic security organization for the Philippines was evolved. Had there been no war, that security force would now have about 400,000 officers and men in the first reserve, and about 200,000 officers and men in the second reserve—a force which an aggressor cannot just brush aside.

As a sovereign country, the Philippines owes it to herself to provide for her own defense. It is axiomatic that the people who would have primary interest in the freedom and independence of the Philippines would be no other than the Filipino people themselves. Conversely, it would be the height of naivete to assume that a foreign people would consider the defense of the Philippines of primary importance to them. We cannot escape the conclusion that we should look to ourselves as the primary source of strength for our national security. We, therefore, have to develop and exploit local resources for defense. Only then, or concurrently with this effort, should we endeavor to reinforce our security organization with commitments of other countries which may have mutual interests with us in certain aspects of our independent existence. An analysis of our mutual defense treaty and other military agreements with the United States will bear out this concept. We cannot close our eyes to the stark reality that the United States' interests will be paramount in the minds of Americans, and that, therefore, United States' contribution to the national security of the Philippines would logically be undertaken only insofar as that effort would also contribute to the defense of the United States. The mutual defense treaty exhorts both signatories to maintain and develop by self-help their individual capacities to resist armed attack. However, insofar as coming to each other's aid in the event of armed attack is concerned, the decision rests in the constitutional organs of the signatories. Being a sovereign state, we have to assume the responsibilities concommitant with sovereignty. We have to place our main reliance for national security in ourselves.

Strategic Position

Geography has placed the Philippines in a strategic position in the Pacific, close to the mainland of Asia with its teeming and hungry people who comprise one-half of the population of the world. Geography also shows that the Philippines is an archipelago of over 7,000 islands, sprawling over an area of 1,000 miles by 500

miles. The Philippines is a tropical country endowed with bountiful natural resources that can provide a substantial standard of living for even four times its present population of 20 million people. The economy of this country is basically agricultural and practically colonial in character. The Philippines is definitely to be classified among the under-developed countries of the world. The current annual gross national income is estimated at over 3½ billion dollars.

The Filipinos are a brave people, jealous of their individual liberties. They are a religious people bound by close family ties, and as a rule, they are inured to adversity. The Philippines has a republican form of government which is basically strong. She does not have any traditional foreign enemies. In fact, we can count on the friendship of many foreign countries.

Role of the AFP

Who is responsible for the security of the Philippines? On the surface, it would seem immediately apparent that the Armed Forces of the Philippines (AFP) is the entity responsible for the security of the country. A closer analysis will show, however, that the AFP is only a tool at the disposal of the nation to perform certain missions. It could be contended that the logical mission of the Armed Forces is national security. However, the responsibility does not lie with the AFP. The responsibility is a national responsibility and not that of a single person or entity of the government. The President, as head of the state, carries an important share of this responsibility as does Congress. However, all other instrumentalities of the government, as well as all the citizens of this country, also have a stake and share in the responsibility for national security. The Armed Forces may be likened to a hammer—with the nation as the wielding hand that strikes the blow. This point cannot be overemphasized and the sooner everybody concerned fully realizes this obligation, the sooner will our people wake up to the reality that the entire nation can only blame itself should its security preparations fail in a crucial test.

What then is the role of the AFP in our national security? The National Defen Act provides that "it shall be the duty of the Central General Staff to prepare plans for national defense and for the mobilization of manpower and material resources of the nation in an emergency." It is also the duty of the AFP to organize, train, and equip a defense force and maintain it at peak efficiency. Everything that the Armed Forces does, however, is under the direct supervision of the President, and all of its activities are authorized and supported by laws passed by Congress. In the final analysis, therefore, the Armed Forces of the Philippines can be only as strong and effective as the people represented in Congress would want it to be. Although the AFP is the instrumentality directly charged with protection of the country against armed aggression, it cannot, by itself, provide all the wherewithals which it may consider necessary for national security. It can and does prepare plans for national defense and for mobilization; but it cannot, by itself, implement and carry out these plans.

Time for Action

The military requirements for the defense of the Philippines are very exacting. Being small, the country cannot trade space for time during which to organize a defense force. Being agricultural, the country cannot produce, by herself, the munitions necessary for war.

Having very limited financial resources, it cannot afford to build a formidable defense force in a short period of time. In times of peace, therefore, it would

be necessary for the country to build up a force of respectable strength that can be mobilized in a relatively short time. It is necessary for our national security that when war comes our men will have been already organized, trained, and equipped with adequate stores of critical equipment and supplies necessary to carry out defensive action.

What effort is the country making at present to secure herself? Ever since liberation, the Philippines has been plagued by internal disorders. Coupled with this, her economy was devastated by the last war. The government, therefore, rightly bent the national effort toward the restoration of order and the rehabilitation of the country in order to provide a sound basis for the growth of the nation. There having been no imminent threat of outside aggression, preparations for defense against such aggression have been relegated to the background.

Normalcy in national economy and order has been practically re-established. At the same time, however, war clouds hover on the horizon. The country cannot afford to feel safe indefinitely. The people must face the responsibility they owe to themselves. The country is now in a position to start providing for security from outside aggression. To defer action may mean the death of this country. The time for action is now.

Nationalism in the Middle and Far East

Digested by the MILITARY REVIEW from an article by Major M. E. Bransby-Williams in the "Journal of the Royal United Service Institution" (Great Britain) May 1953.

BEFORE considering the effect of the rising tide of nationalism in the Middle and Far East on previous strategic thought, it is necessary to point out, briefly, the new form of strategy which has also appeared on the world scene, and which must be taken into account at the same time.

Cold War Strategy

As cold war strategy is an art still little understood this side of the Iron Curtain, it is only possible to make some tentative observations.

Cold war is, in the first place, a war for men's minds—not educated minds in the main, but simple minds. Its weapons of attack are the written and spoken words; its main defenses are censorship and the exclusion, in every way, of the enemy's weapons of attack.

In the second place, it is a battle of intelligence; the acquisition of intelligence about the enemy, not only military intelligence, but also political, economic, and all other forms. A fifth column is the main short-range weapon and agency for gathering intelligence. The long-range weapon is the radio.

In the third place, cold war is all that was understood by diplomacy. No diplomatic move can be undertaken without its effect in the cold war being carefully calculated.

In our conduct of the cold war, the main weapons of attack and defense are largely ignored. Our security measures are negligible in comparison with those of our opponents. Our censorship does not exist, and perhaps, most important, our creation and infiltration of a fifth column not only into enemy countries, but into so-called neutral countries, is not even considered, apparently.

In the cold war, there are no neutrals. As on a previous occasion when two creeds

were in conflict,—"He that is not with me, is against me,"—a legitimate target for our cold war attack is all those who are not definitely on our side. This definition embraces all the peoples of the Middle East and Far East with only one or two possible exceptions. The exclusion of communism from our own peoples is not enough, it must, if possible, be excluded from all peoples and our own case must be continuously stated to all peoples.

Our idea (ideology or *weltanschauung*) was last firmly stated in about 1900. In many countries of the Middle and Far East, our Victorian idea of democracy did in fact prevail, and various forms of parliamentary government were established. In these countries, we are, so to speak, on the defensive. In some of them, our ideas have been found not to be workable. Iran and Egypt are two particularly outstanding cases. The actual meaning of the word strategy has changed, or perhaps it now has two meanings. The strategy we must first consider is cold war strategy because we are already engaged in a cold war. In fighting a cold war, we are incidentally maneuvering for a possible hot war, but the results we achieve in the cold war, can be decisive in themselves, and the other war may never be fought; indeed, as the situation exists today, it is more probable than not, that there will be no world war within the next 20 years.

Nationalism and Communism

The rising tide of nationalism in the east, appears, at first, to be to the disadvantage of colonial powers. The subject peoples become intransigent; customary sources of raw materials are threatened or even denied; where native governments come into being in backward countries, they prove so inefficient in the primary task of government, that of keeping law and order, and, as in the case of Burma, production fell off severely. The customary view to take of such a situation is that this provides a chance for Communist infiltration, and that the spread of want provides a wealth of recruits for the Communist idea. This is true in the short run, but nationalism, as such, is antipathetic to communism or at least to the Soviet version, and if handled correctly, may, in the long run, prove an ally. The appeal of communism in India, Pakistan, and Burma may have grown as a result of worsening material conditions, but it should lessen if it is represented as the appeal to come again under the domination of a foreign power. As long as communism and local Communist parties take their orders from Moscow, they cannot be expected to appeal to a true nationalist, except as a temporary ally in throwing off the yoke of an existing colonial power.

Nationalism in the Soviet Union

It is a mistake in considering nationalism to believe that it stops at the borders of the Soviet Union. A world trend of this kind cannot be isolated, and there must be at least a potential comparable force within the Soviet Union. It exists, we know, in the satellites and has already decisively manifested itself in Yugoslavia.

There is every reason to believe and hope that the Ukrainians, Georgians, Azerbaijanians, Uzbeks, Turkmenians, and all the other racial minorities in the Soviet Union have national aspirations at least as strong as those manifested in those parts of the Middle and Far East outside the Soviet frontiers. Above all in China, where nationalism is as pronounced and aggressive as anywhere in the world, a desire for independence from foreign domination is probably the most powerful force in the country, more powerful than the Communist idea, and the potential differences stemming from this between China and the Soviet Union are, perhaps, the most important factor on our side in the world situation today.

The Middle East

In all strategic considerations of the Middle East, the first point to decide seems to be where does the Middle East begin and end. Since the present problem is to consider the effect of the rising tide of nationalism in both the Middle and Far East, the boundary between these two is, perhaps, not important. For convenience, however, it must be defined, since the changes in strategic problems in the western end of this very large area are, to a certain extent, different in kind from those at the other end. It is proposed, therefore, to take the Middle East to extend from the western borders of Turkey and Egypt to the eastern borders of Iran, and to consider the rest as the Far East, because it is on the borders of Iran that the problem changes.

Turkey

The violent nationalist spirit in Turkey, which manifested itself under Kemal Ataturk, has proved to be to the advantage of Great Britain and her allies. There is scarcely any point in recapitulating history when considering this problem, because the situation throughout the Middle East has changed so radically since even 1945, and is continuing to change so fast, that the past has fairly little bearing on the present and future. In Turkey, however, the revolutionary change took place earlier and may serve as an example of what may be the outcome in some other states. There probably will not be much argument that a stout-hearted and fiercely independent Turkey placed across the Bosphorus is a very valuable bulwark against Soviet expansionism in that direction.

The rest of the Middle East constitutes a power vacuum the like of which the world has hardly hitherto experienced. Great Britain's shrinking power and loosening grip, resulting more from her failing sense of purpose even than from her reduced material means, have been partly the reason for the creation of this vacuum. The rising tide of nationalism has been the final cause of the withdrawal of our influence from Iran, as by mischance it coincided with a Socialist Government's period in office in Great Britain. It may be, however, that we have done the right thing for the wrong reason, and in the wrong way. We may yet find it expedient to withdraw from Egypt, but if we do so, it must be with dignity, and because it is in our interest to do so. Whether it is in our interest depends on its strategic value in war, and the balance of advantage in the cold war.

Strategic Value

What strategic value has the Middle East, first to us, and second to the Soviet Union?

The answer, if given without prejudice, is that the area is not exceptionally valuable to either. This is not perhaps a novel idea, but it is certainly not widely held.

"The crossroads of the world" was not long ago a favorite description of the Suez Canal. The Suez Isthmus is also sometimes referred to as the "land bridge to Africa." These titles would lead one to suppose that the Suez Canal Zone is an area of exceptional strategic importance. This was certainly the case before air power made its appearance and while sea power alone was predominant. Since the arrival of air power, the case has been different. The strategic value of the Middle East in war has been very much reduced in some respects, and in one respect, it has been increased.

Soon after hostilities started, the canal would almost certainly be made unusable, and for a crossroads, the traffic would, at the least, be light. As a land bridge to Africa, it is doubtful whether the Isthmus has, in fact, ever been such a great attraction. Certainly Alexander used it,

and also the Arab hordes and even Napoleon, but the truth is that it does not lead to anywhere very desirable beyond Egypt itself, whose inherent value in war, is very limited. Beyond Egypt, vast expanses of desert have to be negotiated in all directions except up the Nile, and to conquer Central and South Africa, with a force maintained only by a land line passing over the Isthmus, does not merit consideration. The fact is, that to conquer Africa, command of the sea and air is essential. The strategic value of the Middle East, therefore, reduces itself to oil, and that is indeed a considerable item, because not only is it a vast reservoir of oil, but it is oil in the right place to sustain a war either in the Balkans or in the Indian subcontinent.

From the Soviet point of view, the value of the oil would be a long-term one. She could not use it except for any force she might hold in the Middle East as defined above. She could not get it back to the Soviet Union in any quantities without a pipeline to the Caspian or Black Sea, which she could hardly expect to be allowed to build, without interference. The Soviets' main object would be to deny it to Great Britain. Another interest the Soviet Union has in this part of the world is an outlet to the Indian Ocean. The value is very slight, however, except on a long-term basis, because even if the Soviets were on the Persian Gulf, they would have no ships available there. As mentioned above, the Bosporus is a much more attractive proposition, and it has been shown that a nationalist Turkey is fortunately most unlikely to concede that without a struggle.

Apart from Turkey, what difference then does Middle East nationalism make to our strategic thinking? The answer is very little, once war breaks out, but a great deal until then.

The greatest effect lies in the power vacuum created in the first instance by our withdrawal, and further accentuated by the hostility of Jews for Arabs which largely neutralizes the resistance value of either, and by the quarrels and intrigues among the Arab states themselves, which further neutralize their resistance value.

To sum up, therefore, the strategic value of the Middle East itself in war is not of the greatest importance, and lies almost entirely in its oil. Militarily, none of the Middle East states, except Turkey, which is very important, and, to some extent, Israel, which is not on the way from anywhere to anywhere and matters very little, can be said to count at all in opposition to a great power. Whether these states, always excepting Turkey, are nationalist or not, matters very little after the outbreak of war.

Cold War

The strategic importance of this area in the cold war, however, is difficult to overestimate, and the effect of local nationalism at the present stage, might be enormous and is largely unpredictable. It is fairly certain, though, that it is better to let local nationalism work itself out as far as possible on its own. The example of Turkey is one which other states should be encouraged to follow. Certainly the national qualities of the Turks are different from those of, for instance, the Iranians or Egyptians, but it may be surprising what changes the nationalist spirit may bring about.

On balance, therefore, it appears to be our best policy to retire as far as possible into the background in the Middle East at the present time. When the nationalist dust eventually settles, economic interest will again assert itself, and there is no reason why we should not then still find ourselves with an advantage over the others. Meanwhile, the local governments must be given every chance to deal with their own communism,

and all our attacks must be with cold war weapons.

The Far East

India and Pakistan

Nationalism in India having already reached full expression, this area hardly comes within the subject of this article. Nevertheless, it is necessary to mention that Indian and Pakistani nationalism has, within the last 5 years, brought about a situation whereby the whole of the Indian sub-continent has been virtually neutralized so far as international politics and world strategy are concerned.

It is, in fact, in this area that rising Asian nationalism has wrought the greatest change of all. The previous British concept was of India as a great strategic base for action on any part of the periphery of the Indian Ocean, whether the east coast of Africa, Iran, Burma, or the East Indies. It was also a source of plentiful manpower reserve and of important raw materials.

Theoretically, this situation has not suffered a great change, as India and Pakistan are still part of the Commonwealth, but in practice, it is totally different for at least two reasons:

1. The internecine struggle over Kashmir has fixed almost all the armed forces of both Dominions facing each other, and until the problem is solved, the potential of both countries for an outside war is likely to remain slight.

2. There is no certainty that either Dominion will, in fact, join in any future world war unless directly threatened itself. Such a direct threat was, until recently, improbable. However, the growth of nationalism in China has led to the annexation of Tibet, and Chinese claims to Nepal and to considerable parts of Assam and Burma, have made the threat to India more real. Nevertheless, there is a danger that each Dominion might wish to gain an advantage in the Kashmir dispute by keeping out of a general war and hoping to see the other in it.

As far as conventional strategy is concerned, therefore, the situation in India has taken a turn for the worse from our point of view. In the cold war, however, things are quite the reverse. Communism, in itself, does not seem to have any great appeal to the Indian peoples. There was, however, always a chance for it to ally itself with native nationalism as long as the British Raj offered a common opponent. Now, however, it is faced with the stupendous task of converting a people, all of whose traditions, habits, religion, and entire way of life are based on the exact antithesis of communism. The Yogi and the Commissar truly are absolute opposites.

A further disadvantage now suffered by communism is that it can, and should, be represented as the influence of a foreign power—in fact, the very weapon they could use against us while we were there, can now be turned against them.

Burma

The strategic importance of Burma is that it lies across the back door to both China and India. Until recently, this was not a matter of great importance, but in the last war it became a part of the vital supply route to our Chinese allies fighting the Japanese. It remains of great importance now that a hostile China stands along the common border. It is also significant that the Chinese lay claim to considerable areas of Burma. The assertion of Burmese independence has had a very considerable effect on this situation. The weakness of Burma, reft by internal dissension, has produced a vacuum almost comparable to that which exists in the Middle East. Sooner or later, Chinese expansionism is bound to press across Burma's borders. When that time comes, the Burmese may well call on the help of the United Nations, but it will then be

too late. The reactions of India are bound to be immediate, and in all of this area, Burma, Assam, Nepal, and even Tibet, a potential threat of war exists. The threat is new and results from the rise of Chinese communism. It is made more imminent by the weakness of Burma and India resulting both from their domestic troubles and the Kashmir issue.

In another respect, which has strategic implications, Burma's new status has caused a change for the worse. This is the decline in production of Burma's main industries of rice growing, oil, and timber. The most serious of these is probably rice, since the disappearance of the large exportable surplus previously available to other countries of Southeast Asia, and especially India, has two main results. In peace, food in those countries is even shorter than it otherwise need be; in war, the balance of India's needs, if they had to be brought, as at present, from America and Australia, would be a serious drain on available shipping.

In the cold war, Burma's new status is far from being an unmixed blessing. Local Communists can look to Communist China for every kind of assistance, and the government has not the power to guard its own frontiers or control all its own territory. On the other hand, if we had still been in charge, all the elements at present warring against each other might, by now, have joined against us, and we might have found ourselves in a situation similar to that of the French in Indochina. To have continued to draw on the wealth of Burma, and maintain its production at the prewar level, might have been a costly drain upon our strength.

Strategically speaking, both for cold and hot war, Burma must now be regarded as a dangerous vacuum.

Malaya

Malaya is not in the same category as the other countries so far mentioned since nationalism there is not, strictly speaking, a problem at the moment if the Chinese are regarded as a foreign element. Malayan nationalism, however, is growing and is of value on the side of law and order. The solution in Malaya can never be a nationalist one when two races, indeed five races if one includes Indian, Sakai, and British, are so interspersed.

The strategic importance of Malaya always lay in the naval base of Singapore, and in the strategic materials—rubber and tin—which it produces.

The strategic importance of Malaya has in no way changed in these respects. Strategic thinking about Malaya has, however, been altered by the situation in Indochina.

Indochina

The rise of nationalism in Indochina is perhaps the most ominous occurrence in the entire area. The French have been forced into just the position in which we might have found ourselves in Burma, India, or even Iran. They are upholding a regime which has no wide basis of popular support and lacks that support largely because it is backed by the French. Something in the nature of an *impasse* has resulted. The strategic importance to us, and indeed to the entire free world, of Indochina is very great. If the Communist Vietminh should gain control of the entire country, the situation in Malaya would be aggravated to a serious degree. Indochina must, therefore, be held. It is perhaps a pity that the French were unable or unwilling to set up an indigenous non-Communist government, and then get out. Indochina would probably now be another power vacuum, but that is preferable to a scene of actual hostilities. Fifteen years ago, Indochina would not have been picked out by many people as an area of vital future strategic importance, and nowhere else, perhaps, is the result of the sudden rise of Asia more apparent.

China

The author does not intend to consider Korea or Japan, as neither country comes within the terms of the subject. The last country to be considered individually is, therefore, China.

The Japanese invasion of China greatly speeded the growth of the nationalist spirit in China. The fact that this newly awakened China has fallen under the Communist spell has resulted in the tempo being further accelerated. The Communists, of course, have worked on patriotism to achieve their ends and, like all autocratic regimes, have found it convenient to direct the attention of their people against the foreigner, first within the country as a scapegoat for the evils and shortcomings, which result from their own actions. Later, their attention is directed toward the bordering states so that a policy of aggressive expansionism can continue to serve as a distraction from internal difficulties. Strategically speaking, the emergency of China as a united and expansionist power would, whatever the internal form of government, have been a tremendous new factor. When that country is in fact Communist, the significance is far greater still.

Strategic considerations in the recent past, must always have been largely concerned with the possible results of a conquest of large parts, or even all, of China by Japan. The consolidation of a large Japanese empire on the Chinese mainland would have been, and indeed was, only a first step toward expansion southward with the object of conquering all of Southeast Asia. The Japanese threat has now receded and, in view of the power of the new China, it does not seem likely that Japan will be able to get a foothold again in Manchuria, Korea, and Northeast China, unless China first becomes involved in a war with another great power, of which the possibilities appear to be four: the Soviet Union, India, the United States, and Great Britain. Without the economic basis provided by the mineral and other wealth of the continent, Japan alone cannot, in the future, develop a serious threat to our possessions in Malaya and the Indies, or to Australia, always assuming that we remain in close alliance with the United States. This change in the Japanese state is the first of the new considerations.

Events centered on China may take one of several courses: China may remain bound to the Soviets by their common ideology. If this happens, it will be the first time since the days of Genghis Khan that a large part of the main land mass of the world is under one domination. It will be the first time that sea power has faced such a situation. It would be more correct to say sea plus air power facing land plus air power on such a scale. The advantage of sea power in the past has been twofold:

1. It has made possible the movement and concentration of forces to be carried out more quickly than by the opposing land power, the initiative, in fact, provided by choice of time and place—flexibility.

2. It enabled its possessor to deny his opponent access to vital supplies.

Against a Chinese-Soviet combination the first principle would continue to apply, indeed the vastly increased area would provide a proportionately greater number of possible points of attack and an increased area to defend. It is the second principle that will no longer apply. The entire vast area will be virtually self-sufficient. As they would also have the advantage of numbers, flexibility of attack by air or sea would be the only inherent advantage remaining (superiority of industrial production is not permanent, and is, therefore, not included as an inherent advantage).

Events, however, may not take that course in China. The Soviets are an ar-

rogant people, and what happens when they have dealings with another proud people, we have already seen from the example of Yugoslavia. There is, fortunately, much more ground for contention between the Soviet Union and China than between China and any other country. The Soviets may well treat China as another satellite, and everything in Soviet past behavior, in their expressed doctrine, and in their national character, makes it probable that they will do so. It seems a very strong probability that the Soviet Union is congenitally incapable of working with anyone for long; she will want to dominate. Chinese nationalism will not accept that situation, and in the many possible subjects of disagreement, such as Port Arthur, Manchuria, and Outer Mongolia, there is enough material to start the Chinese on Tito's course many times over.

A third possible course for China is that she continues to expand south and east, and in doing so acts as a catspaw for the Soviets in draining the strength of the Western powers. As long as China is engaged in war, such as the one in Korea, she is forced to remain on terms with the Soviet Union.

This, then, is the second main strategic factor for us to consider. We should at all costs disengage ourselves from conflict with China, and remain disengaged. The long-term aim must be to see China and the Soviet Union at war, either a cold or hot war.

The Rise of Asia

The rising tide of nationalism in Asia means, in effect, the rise of Asia, and this rise of Asia is the outstanding fact of the second half of the twentieth century. The rise of the dark continent of Africa may be delayed some generations yet, but what used to be described as the yellow peril, is upon us now. The spread of communism has coincided in many areas, but it must not be confused. The yellow peril may not actually be a peril. Asian nationalism is, in itself, no enemy of ours; the creed of communism, on the other hand, is the deadly enemy of our way of life. Our main problem is not to let the one harness the other against us. It has been the intention here to show that this need not happen; indeed, that Soviet communism is the enemy of all nationalism except Soviet nationalism.

The main factors in the situation appear to be:

1. For colonial powers the pattern is everywhere much the same. Communism can enlist local patriotism against the governing power.

2. A newly independent state is exceedingly jealous of its independence, not only from its old master, but from any foreign state. It may also be aggressive. The chance of such a new state combining with others is slender. The Arab countries, India, Pakistan, and Burma are examples.

3. The result of this has been the creation of several areas of great internal weakness which amount to power vacuums.

4. The Suez Canal, and, indeed, the Middle East, is no longer of the same vital strategic importance it once was to us.

5. Singapore and Malaya remain vital. Fortunately, Malaya has a mixed population.

6. Burma is one of the weakest points, and potentially the most threatened.

7. Indochina is the gravest actual danger.

8. Nationalism does not stop on our side of the Iron Curtain.

9. The greatest single factor is the rise of China. The course China takes—or is driven into—may decide the fate of the world. Among other things in her rise, she has overshadowed her dangerous neighbor, Japan.

10. China and the Soviet Union together

would produce a situation new in the modern world, where sea power would lose one of its great advantages, the ability to starve out its enemy.

Our Future Course

The British Commonwealth, and especially the United Kingdom, must trade or perish. Her problems are increased in proportion as she loses control of sources of raw material and of markets for manufactured goods. Nevertheless, the conclusion from this, is that the rise of Asian nationalism is not necessarily all to our disadvantage, it can be a valuable ally or a dangerous enemy; our strategy must aim continuously to make it work in our favor. The requirements of cold war strategy may be different, or even the opposite, of those of hot war; our absence may be more effective in fighting the cold war enemy than our presence, because ideas cannot be fought with troops or ships. That is not to say that the troops and ships must not be available, but they must be in the background; in this war, the primary weapons are different. This is especially apparent where the Soviet Union is concerned; she has been much more truly successful where her armies have not been, such as in China and Indochina, than where they have been, such as in the European satellites. In the cold war, we must direct all our effort to foster national resistance to the expansion of Soviet communism outward; we must encourage, by all means, the growth of nationalism within the borders of the Soviet Union. Every situation holds within itself the seeds of its own decay, and the monolithic bloc of the Soviet Union may yet be split by the very spirit of nationalism. We must, above all, disengage with China, and aim to detach China from the Soviet Union. It is no use trying to halt the rising tide, the only thing to do is to pick up our chair and move back a few paces. A people who live so much by the sea, as we do, should know that the tide ebbs as well as flows.

The Tank as an Antitank Weapon

Digested by the MILITARY REVIEW from an article by Major R. D. Law in the "Military Digest" (Pakistan) July 1953.

EVERY weapon that appears on the battlefield is soon followed by a number of weapons designed to counter it. The tank is no exception. It has been responsible for the invention of antitank guns of various types, antitank mines, bazookas, antitank grenades, and other weapons. Even the development of air-to-ground rockets is partly the result of the development of the tank.

The tank which carries an antitank gun is also capable of destroying other tanks. All of these weapons fit into a definite pattern of antitank defense, of which the antitank gun has become the basic weapon.

The aim of the defender, in regard to enemy armor, will be to prevent the enemy from bringing to bear on him its characteristics of fire power and shock action. Logically, the steps which the defender would take toward the achievement of this aim will be, first, to prevent the enemy armor from participating in the battle. If this is not possible, he would take steps to destroy or keep enemy armor at a distance from which it cannot employ its fire power effectively. If this also fails, the defender would then try to destroy

the enemy tanks as they approach his position.

This pattern of antitank defense is the basis on which the design of antitank weapons is based.

The destruction of enemy tanks before they are able to participate in the battle is presently accomplished, mainly, by the employment of rocket firing aircraft against tank concentrations. If this method could ensure the destruction of enemy armor to an extent that would render it completely ineffective, there would be no need for any other antitank weapons.

This, however, cannot be guaranteed. The first prerequisite is air superiority. In addition, it is doubtful whether aircraft can locate an enemy's entire armor strength as the concentrations would most certainly be concealed. Moreover, rocket firing aircraft have to carry out low level attacks in order to be effective, which makes them very vulnerable to light antiaircraft weapons and small arms fire directed against them. Then, too, there is the imponderable factor—weather. Finally, the accuracy of these rockets is such that a high percentage of hits cannot be guaranteed.

New Weapons

In the future, the use of guided missiles may replace this method and overcome some of the difficulties. The degree of accuracy which it will be possible to achieve against a small target like a tank is, however, a matter of conjecture. It is also doubtful whether it will be possible to reduce the cost of these weapons sufficiently to enable their employment in very large numbers.

The employment of the tactical atom bomb, it is felt, will, also, not be a 100 percent cure for enemy tank concentrations. When the threat of an atomic attack exists, it is unlikely that an enemy will concentrate his armor sufficiently before battle so as to present a worth-while target.

It is, therefore, evident that a need still exists for an antitank weapon to destroy enemy tanks after they are deployed for battle.

Antitank Guns

This brings us to the second stage of antitank defense—the destruction or the holding off of enemy armor at a range from which it cannot effectively bring to bear its fire power on our defenses. The weapon employed for this purpose is the antitank gun, which may either be towed or self-propelled.

While in the United Kingdom the heavy-gun tank is replacing the towed and self-propelled antitank guns at the divisional level, there is a considerable amount of opposition to this step in certain quarters.

It is maintained by many that the towed antitank gun is more suited for this purpose as it is easy to conceal and considerably cheaper than a self-propelled antitank gun or a tank. While this is not disputed, there are certain drawbacks to the towed antitank gun. First, once it opens fire, it is easy to locate and destroy. Even machine-gun and high-explosive fire, from tanks and artillery, will put it out of action.

Further, because of its lack of mobility, once spotted, it has to be extremely sensitive to its line of withdrawal being cut off. In fact, it can be said that an antitank gun, on an average, has a very short life once it opens fire. The other disadvantage, from which a towed antitank gun suffers, is that it is purely a defensive weapon. Its role in offensive operations is restricted to the reorganization phase after an attack, and protection of flanks and columns on the move. These, again, are essentially defensive tasks.

Apart from occasional participation in light-weight bombardments, there is hardly another offensive task which a towed antitank gun can be given. Further, it of-

fers no protection, whatsoever, to its crew.

Some of these drawbacks are overcome by mounting the antitank gun on a tank chassis and making it self-propelled. Although this makes the gun more mobile and affords its crew a certain degree of protection, it can still, at best, only employ "hit-and-run" tactics. In fact, it still remains a defensive weapon and, unlike a tank, it cannot take offensive action against enemy armor. It also remains, like the towed antitank gun, a one-purpose weapon. Moreover, its crew is still vulnerable to artillery fire employing proximity fuzes, and machine gunning from the air.

Use of Tanks

Let us now examine how a tank can be employed in the antitank role. The fact that a tank, mounting a powerful gun, can carry out the role of shooting at enemy tanks from concealed positions, as effectively as towed or self-propelled antitank guns, is obvious, and does not merit any further discussion.

It is, admittedly, a little more difficult to conceal a tank, but the difficulty is only comparative. In addition, tanks can be sent out with adequate fire support and infantry protection to raid enemy assembly areas and forming-up places. This, apart from disorganizing the enemy's preparations for an attack, will also result in drawing away some or most of his armor from his main effort. Our own tanks then, by falling back on previously selected positions, can impose heavy casualties on enemy armor. The morale effect of such bold action on our own troops will be tremendous. Such actions would go a long way in keeping alive the spirit of offensive action during defensive phases of battle.

The role of tanks in offensive operations falls outside the scope of this article. Reference is made to them here to bring out the fact that a tank, unlike a towed or self-propelled antitank gun, is a dual-purpose weapon.

Although the main role of armor is offensive, it can be employed equally well to counter enemy armor in defensive operations.

The only real argument against the employment of tanks in the antitank role can be their high cost. This, again, is open to question.

In protracted operations, the cost of the total number of antitank guns destroyed, and the loss of manpower through casualties suffered by antitank gun crews, will probably not be much less, in terms of cost, than the number of tanks lost while employed in the antitank role.

In addition, the flexibility of a tank as a weapon, as compared to an antitank gun, will give a commander in the field an advantage which will outweigh its higher initial cost when used in this manner.

Role of Armor

It would perhaps be better to state here that changing the role of armor entirely to that of antitank defense is not advocated. The roles of armor must remain as they are at present. What is implied here, is that antitank regiments should be equipped with tanks. Whether these regiments are manned by armored corps or artillery personnel is a different matter and falls outside the scope of this article.

There is still, however, one role for which the towed antitank gun is more suited. In operations, such as river crossings, it is essential that some long-range antitank weapons are put into the bridgehead as quickly as possible. It is obvious that taking tanks across will take longer than towed antitank guns owing to high classification bridges required by them. This can, however, be overcome by keeping some towed antitank regiments as corps troops or by having some towed antitank guns in infantry battalions.

Even with the use of tanks in the anti-

tank role, it is doubtful whether it will be possible to stop every single enemy tank which tries to enter our positions. It is accepted that in an attack by tanks in large numbers, a certain proportion of them will get through. Moreover, it is not possible to have sufficient tanks or even antitank guns to provide protection against enemy armor everywhere. The infantry, therefore, should also have some means at their disposal with which to protect themselves against enemy tanks which get through the outer antitank defenses or when no other antitank weapons are available.

Short-Range Weapons

We come now to the short-range antitank weapons. These weapons take the form of recoilless rifles, bazookas, and antitank grenades. They all generally employ an explosive projectile with a shaped charge which can penetrate practically any thickness of armor used on tanks so far. They are light and easy to handle. Their main drawbacks, however, are their limitations in range and accuracy. They can, therefore, only be employed at short ranges against tanks which have either broken through the outer antitank defenses, or appeared suddenly by surprise.

Their lack of accuracy is further aggravated by the fact that the opportunity to employ them arises when enemy tanks are very close—a time when the nerves of the users of such weapons are not at their best. This can, up to a certain degree, perhaps, be overcome by training, but not entirely as the human factor is still there.

It is, therefore, evident that short-range antitank weapons are really the last resort against enemy armor and they cannot replace other antitank weapons.

The weapon not yet discussed is the antitank mine. The antitank mine is more a weapon of chance than anything else, as it has no destructive effect until a tank actually goes over it. Moreover, unless covered by other antipersonnel and antitank weapons, these mines can be easily removed or destroyed. Even when so covered, the mines can be dealt with after neutralization of the covering weapons. The new, nonmetallic mines are also not a "cure-all" as means have been devised for detecting them. Antitank mines can, therefore, only delay and not hold a tank attack. Usefulness of antitank mines should not, however, be underestimated, since their clever use in conjunction with other weapons can be very effective in delaying enemy tanks. They cannot, however, replace other antitank weapons.

Conclusion

When threatened by enemy armor, a defender aims at inflicting the maximum casualties on enemy tanks at every stage —before the tanks are deployed, after they are deployed for the attack, and finally when they come close to or penetrate his defenses. For dealing with tanks at each of these stages, there are different weapons available but the basic one is a high velocity antitank gun which may either be towed, self-propelled, or mounted on a tank.

The towed and self-propelled antitank guns are, however, essentially weapons of a defensive nature. A tank, while being able to carry out the roles of an antitank gun, is also suitable for other offensive tasks. A divisional antitank regiment, equipped with tanks, would be a much more flexible unit than one equipped with either towed or self-propelled antitank guns.

The additional cost incurred, as a result of equipping this regiment with tanks, will be well compensated by the usefulness of this unit. Moreover, as the casualties in such a unit are likely to be much less than in an antitank regiment, as presently organized, it will be no more expensive in the long run, probably.

There is, however, a need for towed antitank guns for special operations like a river crossing. For this purpose, towed antitank regiments could be held as corps troops and some antitank guns issued to infantry battalions.

While different types of antitank weapons are available, it is not possible to draw a hard and fast line where the role of one ends and another takes over. In order to achieve the best results, all weapons have to be so employed and co-ordinated as to form an integrated system of antitank defense.

Asiatic Pivot

Digested by the MILITARY REVIEW from an article by Major G. T. Sadlier in the "Australian Army Journal" June 1953.

IN COMPARISON with the operations conducted in Korea and Indochina, the campaign in Malaya can be looked upon as little more than a police action. This applies in regard to both the size of the forces engaged and the scope of the operations. However, from the practical outlook, the outcome of the campaign in Malaya is of the greatest importance, not only to the security of the British Commonwealth and to the British situation in Asia, but to the influence of the West upon the Asiatic peoples.

The basic reason for this lies in its geographical location.

Importance of Malaya

Malaya is a peninsula extending from the land mass of Asia and is a natural pivot for the operation of land, sea, and air power throughout the area of southern Asia. She is so located as to dominate the sea approaches to Asia from the Indian Ocean and to the Middle East from the South China Sea. For these reasons, power centered on Malaya can exert influence on Indonesia, Borneo, Indochina, Thailand, and Burma, while still maintaining a degree of isolation from each and all of these countries.

Since the end of World War II in August 1945, a wave of nationalism has swept through the countries of Asia. Native peoples who were previously governed by Great Britain, Holland, France, and America, have sought and attained their independence, and, although many of these peoples are lacking in the ability and experience necessary for self-government and administration, their rights to independence have not been denied them.

And so, in the past 7 years, the political status of every country in Asia, with the exception of Malaya, Borneo, and Hong Kong, has been re-oriented.

Asiatic Communism

Because of the strength of Communist China and the presence of large Chinese minorities in each of the countries in the area, considered together with the instability of the local governments, communism looms as a constant menace to the peace of Asia. Any resistance to the pressure of communism stems mainly from the British presence in Malaya, Borneo, and Hong Kong, and the influence which arises from their presence, and, of course, from the efforts of the French in Indochina. The situation can be appreciated best by examining the prospects, if, for some reason, Great Britain were to relinquish Malaya.

Strategic Factors

As we no longer have the unqualified use of India, the need for a major base for the British forces in the Far East has to be met by Singapore, and, despite the mile-wide causeway separating Singapore from Malaya, the fates of the two are bound together. Our experience in the last war has shown us clearly that the loss of the Singapore base is a natural military consequence to the loss of Malaya.

The loss of Singapore, then, means the surrender of control of the Straits of Malacca, which virtually seals off the short shipping route from the Indian Ocean to the South China Sea. Even with a friendly Indonesia, the bulk of naval and merchant shipping would be forced around a circuitous route to destinations in Asia. Under these circumstances, the naval base at Trincomalee would lose much of its value and the pro-British states of northwest Borneo would be left in virtual isolation.

Similarly, the great bulk of inter-Commonwealth air traffic, both commercial and military, which stages through Singapore, would need to be diverted to use other routes such as that through Cocos Island.

Most important of all, from the strategic point of view, is the fact that the British Commonwealth would lose its last firm foothold on the Asiatic mainland. This would mean the end of direct British influence in the area and without this influence the situation of the smaller countries of Southeast Asia would speedily deteriorate.

Without the example, the advice, and direct assistance from Great Britain and the British Commonwealth, it is questionable whether Burma, Thailand, and Indonesia would be willing and able to withstand the pressure of communism.

Even today, Communist penetration in these countries is a bothersome problem for the newly-established national governments.

The importance of the French campaign in Indochina, and in particular, the maintenance of the security of the Tonkin Delta area, has been emphasized on innumerable occasions. It must be realized, however, that in their efforts, the French draw a great deal of moral and material support from British-held Malaya and Singapore, and also, as an outcome of British influence in the neighboring states of Thailand and Burma. It will be seen that in some regard Malaya is a backstop for Indochina. Therefore, if Great Britain relinquished her foothold for any reason, another result would be that the French would face intensified demands for the evacuation of Indochina, not only from the rest of Asia, but from metropolitan France as well.

Economic Considerations

Economically, Malaya is the principal source of rubber and tin available to the Western powers. Despite terrorism and destruction, the production of rubber and tin from Malaya has been maintained at a high level and these commodities are still among our greatest dollar earners. Certainly, the British Commonwealth has no comparable resources for these items, nor could we readily replace their dollar-earning capacity.

In consideration of these factors, we must conclude that the security of Malaya is vital to our economy and our situation in Asia, not only from our point of view, but for those other nations of Asia who are conducting similar campaigns against, fundamentally, the same enemy.

Success in the present campaign is, therefore, essential.

Political Aspects

It is, now, well established that ultimate success in this type of campaign depends,

to a large extent, upon wholehearted public support. Unfortunately, for various reasons, the people of Malaya have not given this support.

The main reason on the lower level is that the threat of Communist reprisal is a very real deterrent. The Malayan Communist Party has established links in almost every village and town, and through these links they have been able to eliminate informers and members of their families. Originally, this was successful to the extent that both information and assistance from the public depended entirely upon the degree of protection which could be guaranteed by the security forces.

On the higher level, the lack of public support can be traced directly to the difficult political problem which arises from the mixed racial groups in the population.

On the British side, it is the expressed intention that Malaya should become a self-governing component of the Commonwealth. Obviously, it would be unwise to take such a step under the present circumstances, but, unfortunately, the Malay leaders do not accept this reasoning, and some publicly interpret the delay as a breach of good faith by Great Britain. The situation is further aggravated by the recent move of the Government in granting Malayan citizenship to resident Chinese.

These Chinese represent about 45 percent of the total population of Malaya and Singapore, but since they are not accepted as legal "citizens," it is not unusual to find that they will not generally associate themselves with the Government forces. This is more understandable in view of the fact that about 98 percent of the bandit forces are also Chinese. Consequently, in addition to withholding their aid to the Government forces, a large proportion of the Chinese give aid to the bandits either freely or under pressure.

In September 1952, the Government introduced the New Citizenship Code, which automatically granted citizenship to about 1 million Chinese and about 180,000 Indians living in Malaya.

As citizens, many of these Chinese, thus, became eligible for national service. Their call-up greatly aided the manpower situation and, in particular, made up the long-standing deficiency of linguists in the security forces, comprising police and armed forces.

Handling

With regard to the armed forces, it must be understood that this is not strictly a military campaign. It is a state of emergency introduced by the Government to overcome the Communist campaign of terrorism aimed at the people, the economy, and the Government of Malaya. This means that the armed forces who have been called out in aid of the civil power have no legal authority to act on their own initiative.

Direction of the campaign remains with the Government and the armed forces can only undertake operations at the request of, or with the sanction of, the civil authorities.

In the emergency each component of the Government has a specific task:

1. The Government departments continue their normal functions of administration, although their task is made more difficult, since they must also counter Communist propaganda and conduct a defense against Communist penetration of the administrative machine.

2. The police force, as the main instrument of the Government, is responsible for law and order in the populated areas.

3. The Army, with its forces disposed along the jungle fringes—and with one regiment carrying out deep penetration mainly by air—is harassing the bandit forces in the jungle and at the same time

preventing them from breaking out into the populated areas. They have direct support from the Air Force, both for attacks against bandit targets and for air supply.

4. The Navy patrols the coast and assists in coastal operations.

We have seen that the economic production of Malaya is of major importance, and so it is understandable that economic interests are given a great deal of consideration in the conduct of the emergency. Conversely, these same interests have received a great deal of attention from the Communist forces for obvious reasons.

There are two aspects to the problem. First, the production of rubber and tin must be maintained despite the damage inflicted by terrorists. Second, the planters and miners must be kept on the job despite all of the dangers and difficulties.

One of the principal aspects of Malayan rubber, in relation to the world markets, has been the low price at which it could be sold. However, because the well being of all those associated with the production of rubber depends upon adequate returns, the price must be maintained at a reasonable level.

Furthermore, since the Communists were damaging up to 6,000 trees each month (and each tree takes about 5 years to recover), the production has diminished in quantity. A similar condition exists in the tin mines, where valuable imported factories and machinery have been destroyed.

In addition to the difficulties of production, the planters and miners (and their families) live in daily danger. They are the targets of many terrorist attacks, and, although many of them are carrying the fight to the enemy with private armies, the combination of lowered production and constant danger has caused many to pack up and go home.

If we are to get a balanced view of the emergency in Malaya, we must also examine the situation of the enemy.

The Malayan Communist Party is an autonomous group, in that, although they follow the Soviet line, they are independent in their activities and receive little aid from outside of Malaya. It consists of two main bodies:

1. The Malayan Races Liberation Army of about 4,500 full-time armed terrorists who carry out major incidents from their jungle bases.

2. The Min Yuen (or People's Movement), which is an underground organization of unknown strength, supplying the armed forces with money, supplies, and intelligence.

In May 1948, these forces of the Malayan Communist Party started their campaign of violence with the aim of terrorizing the population and disrupting the economy to a stage where the existing government could be overthrown.

For almost 5 years, they have had considerable success in their terrorist campaign, and they have certainly disturbed, if not disrupted, the economy of Malaya. However, in all of their activities, they have suffered through the weaknesses inherent within their own organization.

They have no administrative organization to maintain the forces in the jungle as an entity. Nor have they the transportation or signal equipment to establish speedy communications to meet the requirements of command and supply.

In effect, therefore, the Malayan Races Liberation Army is reduced by circumstances to a number of independent groups of about platoon strength. Each group must tend to their own problems of food, finance, arms, and equipment, and at the same time conduct operations as best they can within the framework laid down in the broad directives of the Central Executive Committee of the Malayan Communist Party. It follows, that although

they achieve a measure of success in small "hit-and-run" actions, their efforts are not co-ordinated and, in fact, are often misdirected.

Progress of the Emergency

In their efforts to counter the terrorist campaign, the Government forces have exploited and aggravated these weaknesses.

All of these problems were recognized in 1948 by the late Lieutenant General Sir Harold Briggs, who was then Director of Operations, and, despite the difficulties of that period, he instituted a long-term program to restore the situation.

This program—the Briggs Plan—aimed principally at:

1. The resettlement of almost half a million Chinese squatters from outlying areas to new villages where protection could be more effective.

2. The deployment of police and army forces to harass the jungle-based terrorists while still ensuring security of the populated areas and the main lines of communication.

3. The strict control of the sale of food, medicines, and clothing to restrict the flow of these items to the terrorists.

Because they were essentially long-term projects, the success of these and other associated measures was not readily visible. However, by early 1952, it was apparent that the terrorists were feeling the effects of isolation from their supply and information sources. Furthermore, there were encouraging signs of increased public support for the security forces.

These tentative successes have been exploited to the full by General Sir Gerald Templar, who, in January 1952, assumed the dual role as High Commissioner for Malaya and Director of Operations. Under his leadership, the antiterrorist campaign has gained even greater impetus. The improved training of the police force, the increased scale of public co-operation, and the constant harassing of the jungle-based terrorists have achieved tremendous success.

So much so that by March 1953, the rate of terrorist incidents had fallen to less than a quarter of the 1951 rate. Consequently, there is comparative freedom of movement on the main highways and the people of the villages, estates, and mines are enjoying greater security in their daily life.

The improvement in the situation can be gauged by General Templar's recent action in canceling the blanket authority for detention of suspects, and by the emphasis that is now being given to the preliminaries for establishing one political entity of the mixed peoples of Malaya. As the successes continue, it can be anticipated that there will be a gradual relaxation of most of the measures introduced for the emergency.

Future Problems

In the meantime, it is clear that the authorities are turning their attention to the other national problems which have been affected by the events of the past 5 years.

Most important of these is the granting of Malayan citizenship to resident Chinese. These Chinese have already been a major factor in improving the flow of information, and thus increasing the efficiency of the security forces. They will be an equally important factor in the ultimate "national" government of Malaya because their intelligence and energy more than equal that of the native Malays. Under the circumstances, it is impossible to completely discount their blood relationship with Communist China and its effect upon the future of the British Commonwealth.

Similarly, there must be some concern for the future of almost 150,000 Home Guards and Auxiliaries with the security forces. After 5 years under arms, their

absorption into a satisfactory "normal" life will require careful planning.

And finally, there is the enemy. Subversion has long been a favorite tactic of Communists, and already there are indications of infiltration into labor and trade union groups. It would be unreal to assume that the end of the phase of terrorism means the end of the Malayan Communist Party.

Conclusion

The emergency in Malaya has not reached a successful conclusion yet, and may not do so for a number of years to come. Even when that is completed, the introduction of an independent Malaya, being part of the British Commonwealth, will be one of the major problems of the Far East. Furthermore, it will remain one of the foundations upon which is built the economic and strategical security of the British Commonwealth in general, and Australia in particular.

To Australia, the success of communism in Malaya, and its inevitable march through the Indonesian Archipelago would be a crucial development.

The Influence of Clausewitz on Military Thought

Digested by the MILITARY REVIEW from an article by Squadron Leader K. V. W. Dharan in the "Indian Air Force Quarterly" July 1953.

OF THE strategists of the eighteenth century, Clausewitz wrote in his treatise, *On War:*

> In this way, in the present age, it came very near to this that a battle, in the economy of war, was looked upon as an evil, rendered necessary through some error committed, as a morbid paroxysm to which a regular prudent system of war would never lead: only those generals were to deserve laurels who knew how to carry on war without spilling blood, and the theory of war—a real business for Brahmins—was to be specially directed to teaching this.

This very gratuitous reference to the Brahmins by Clausewitz is interesting, if not intriguing. What precisely did he mean? German scholars of the eighteenth century were acquainted with classical Indian literatures and, in writing thus, Clausewitz was no doubt referring to the Buddhistic ideal of nonviolence that runs through Hindu philosophy and colors the Indian way of life, and which, in recent times, has found such triumphant political expression in this country. But it is quite evident from his book, that he was not by any means casting an aspersion on a community or a nation. His sole purpose was to remind his countrymen—which he was never tired of doing—of the realities of the times in which they lived.

Old Concept of War

The eighteenth century in Europe was the age of reason, and the Germans, as a race, were much addicted to philosophy. They lived in a number of petty states ruled over by princelings, who occasionally indulged in wars of a kind, mainly for dynastic reasons. They knew little of the intense hatred for one another that sways the nations of today. The wars were fought, not so much by the people, as by small, but highly-trained armies of professional soldiers, most of whom were foreigners, who were paid out of the treasury, which was scarcely distinguishable from the privy purse of the sovereign. It was expensive to maintain an army; much more expensive to wage a war. So wars were fought with caution, observing the necessary proprieties, after elaborate diplomatic flourishes. The armies of both the contending parties knew exactly how long the war would last, for it

depended mainly on the strength of the privy purse. Above all, it was considered most desirable, both by the army and the sovereign, to avoid a battle, for this would have meant the ruinous loss of men and matériel.

So, the military writers of the period evolved fascinating theories of war based upon geometrical relations, angles of operation, topography, and so forth. They felt that a general who observed their dictums could carry on a successful war, indefinitely, without actually having to fight a battle.

The generals of this period, for their part, delighted in complicated maneuvers; in marches and countermarches, always within hailing distance of their magazines; in laying seige to fortresses in which the magazines of the enemy were often placed; in themselves taking refuge in fortified positions: in short, doing everything except fighting a decisive battle. Thus, in Clausewitz's words:

> War became a regular game in which Time and Chance shuffled the cards; but in its signification, it was only diplomacy somewhat intensified, a more vigorous way of negotiating, in which battles and sieges were substituted for diplomatic notes. The army, with its fortresses and some prepared positions, constituted a state within a state, in which the element of war slowly consumed itself.

Napoleonic Concept

Then, suddenly, this delightful state of affairs was shattered by the eruption of the French Revolution. France became an armed camp. War became an affair, not of a sovereign and his mercenaries, but of the 30 million Frenchmen, who were the proud citizens of a state. These men did not understand the old and genteel rules of the game of war, nor were they so skilled as the old professionals, but they were willing to suffer any privations and face any danger, for the sake of their country and their ideals. But what was more important, they could fight, regardless of cost in men and matériel, because they had behind them, not the privy purse of a sovereign, but the entire resources of a nation.

But, what was still more significant, the French Revolution produced a man of genius, the "God of War" himself, who, far from following the old rules, made his own rules of strategy. Napoleon's method appeared to his contemporaries extraordinarily brutal. "He scarcely ever entered upon a war without thinking of conquering his enemy at once in the first battle." Regardless of cost, he threw his men athwart the enemy's lines of communication, his sole object being the destruction of the enemy's force in a great and decisive battle. Consequently, Napoleon experienced no difficulty in smashing and routing the old-fashioned German armies and their allies. And it was not until they, themselves, had learned to apply Napoleon's own strategy in waging a national war, that they were able to drive him out of their countries and eventually defeat him at Waterloo.

Clausewitz

The Germans had suffered grievously from the Napoleonic campaigns. Born in 1780, Clausewitz had lived through the full span of the Napoleonic era when, as he said, "War itself, as it were, had been lecturing." He had ample opportunities to study these "lectures of war," for he had spent his life, like most Prussian officers of his generation, in one long struggle against the Napoleonic invasions of his fatherland. And when the wars were over, he had sat down to synthesize the philosophy and the military experience of his age into a monumental "philosophical construction of the art of war." He did this because, even though the Napoleonic campaigns had destroyed the illusion of a bloodless war, he feared that his countrymen might grow perverse enough to look upon these as acts of barbarism and stupidity and might once

more turn to the "dress-word of obsolete and musty institutions and forms" of only a few years ago.

Clausewitz's Influence

Subsequent history has shown that Clausewitz's appeal for a true understanding of the real nature of war was not lost upon his countrymen, nor upon Europe as a whole. For its profound influence on human affairs, his treatise *On War* has been compared to Darwin's *Origin of Species* and Marx's *Das Capital*. It laid the foundation of German military thought. Moltke, who was responsible, more than any other single person, for the great German victories over the Austrians at Sadowa and over the French at Sedan, came under its spell early. Count Schlieffen, another great military thinker, has stated that Clausewitz "kept alive the conception of 'true war' within the Prussian officers' corps."

His influence on French military thinking was no less profound. In their search for an explanation for their humiliating defeat at Sedan, they had turned to the study of German military organization and were astonished to discover Clausewitz. They were astonished because they were the legal inheritors of Napoleon's strategy and here was a German who had succeeded in accurately fathoming the very spirit of that strategy and evolving principles which had contributed greatly to their defeat.

The effect of this discovery was revolutionary; it led to the complete reorganization of the French General Staff on the Prussian model. In the year 1885, the first lectures on Clausewitz were given at *L'Ecole de Guerre* in Paris, when Ferdinand Foch was a student there.

In his book, *Principles of War*, he showed himself to be a close and faithful student of Clausewitz. He led France and the allies to victory over the Germans in the first world war.

Coming to more recent times, the National Socialists under Hitler evolved their theory of "total war" from Clausewitz's concept of the "absolute war." But the Communists were not behind the Nazis in their admiration of Clausewitz. In the year 1857, Engels wrote to Marx, "Among other things I am now reading Clausewitz's *On War*. A strange way of philosophizing, but very good on his subject. To the question whether war should be called an art or a science, the answer given is that war is most like trade. Fighting is to war what cash payment is to trade, for however rarely it may be necessary for it actually to occur, everything is directed toward it, and eventually, it must take place all the same and must be decisive." In the year 1933, the Soviet Union published annotations to Clausewitz by no less a person than Lenin. Referring to the famous statement that, "War is politics continued by other means," Lenin wrote, "The Marxists have always considered this axiom as the theoretical foundation for the meaning of every war." The Soviet Army successfully applied Clausewitz's concept of "decisive action" and "tactical offensive" against their enemies in the civil war after the Bolshevik revolution and in the second world war.

Clausewitz's Ideas

Clausewitz's treatise *On War* is admittedly incomplete; part of it consisting, as he himself said, "of sketchy material thrown together in a hasty manner." Subsequent researches have shown that Clausewitz was ignorant of some of the essential points of Napoleon's strategy. Enormous technical advance has recently been made in the method of waging war. Yet, despite these imperfections and changes, Clausewitz as a military thinker stands unrivaled. This, because he dealt with the nature and the essential spirit of war. He realized, as no other thinker did before his time, perhaps with the

possible exception of Machiavelli, that the validity of any analysis of military problems depended fundamentally on a correct conception of the philosophy of war.

True Nature of War

Clausewitz first analyzed the true nature of war. He began with the consideration of one of the most elementary forms of human conflict, that of two wrestlers, each one striving by the utmost use of his physical force to throw his opponent and thus make him submit to his will. The *aim* of each man is to submit the other to his will, and the *means* employed is physical force or violence. Increase the men a hundred thousand fold and arm them with the latest weapons of destruction, still the essential nature of the conflict does not change. "War, therefore, is an act of violence intended to compel our opponents to fulfill our will." But before we can compel our opponent to fulfill our will, we must disarm him, and "disarmament becomes, therefore, the immediate object of hostilities in theory." And the only way to disarm our enemy is by the shedding of blood, however horrible the prospect may appear to a sensitive mind, because if we do not shed his blood, he will shed ours, which is even a more horrible prospect to contemplate. Therefore, *one of the most dangerous of all errors in the prosecution of war is to permit a spirit of benevolence to interfere with it.* Now, the degree of intensity of the conflict will depend on the importance and duration of the interests involved. The greater these interests, the greater will be the intensity of the struggle. But since struggle is an act of force, "the shock of two hostile bodies in collision," it, necessarily, reacts upon the feelings, which in turn intensifies the struggle. As a result, war becomes an "act of violence pushed to its utmost bounds." Our intention is to disarm the enemy, because if we do not disarm him, he will disarm us and we will no longer be our own master; therefore, we must employ the sum total of all available means at our disposal and the strength of our will to oppose his powers of resistance. Our enemy reacts in the same way. The resulting war Clausewitz calls, "the absolute war" or "the perfect war."

Absolute War

The motif of "the absolute war" runs through the entire treatise, and a clear conception of its true nature is very necessary for an understanding of Clausewitz. "The absolute war," as we have seen, is the logical outcome of certain simple postulates of conflict reaching an extreme. This is only possible, however, if war is a completely isolated act, if it is limited to a single solution, and if it contains in itself, the perfect solution. But war, for one thing, is never an isolated act, like, for instance, the two wrestlers trying to throw each other; various other factors, quite often irrelevant and unexpected, impinge upon it. Neither is it a single action, because in a single battle we cannot embrace all the troops concerned in a war, the entire country, the allies, and various other contributory factors. Nor is the result of a war ever absolute. "War in the real world is not an extreme thing which expands itself in one single discharge; it is the operation of powers, which do not develop themselves completely in the same manner and the same measure, but which at one time expand sufficiently to overcome the resistance opposed by inertia or friction, while at another they are too weak to produce an effect." In the consideration of "absolute war," we apply the rules of logic; in that of real war, the laws of probability; because "every (real) war is rich in particular facts, while at the same time, each is an unexplored sea, full of rocks, which the general may have a suspicion

of, but which he has never seen with his eye, and around which, moreover, he must steer by the night."

What, then, is the use of this concept of the "absolute war"? It is as useful to the student of war as is, for instance, "absolute temperature" to the student of physics. It is the touchstone by which we evaluate wars in real life. Clausewitz places the utmost importance upon this concept for, he says, "according as we have in view the absolute form of war, or one of the real forms deviating more or less from it, so likewise different notions of its results will arise." Again, "it is its duty (of the theory of war) to give the foremost place to the absolute form of war, and to use that form as a general point of direction, that whoever wishes to learn something from theory, may accustom himself never to lose sight of it, to regard it as the natural measure of all his hopes and fears, in order to approach it *where he can or where he must.*"

In order to distinguish real war from absolute war, Clausewitz introduces the conception of "friction." It consists of "danger," "bodily exertion," "information in war," and an infinity of petty and incalculable circumstances originated by chance. "Everything is very simple in war, but the simplest thing is difficult. These difficulties accumulate and produce a friction of which no one can form a correct idea who has not seen war. The military machine, the army and all belonging to it, is in fact simple, and appears on this account easy to manage. But let us reflect that no part of it is in one piece, that it is composed entirely of individuals, each of which keeps up its own friction in all directions." This is because "activity in war is movement in a resistant medium. Just as a man immersed in water is unable to perform with ease and regularity the most natural and simplest movements, that of walking, so in war, with ordinary powers, one cannot keep even the line of mediocrity." These are some of the factors that prevent war in reality from ever approximating war on paper, or the "perfect or absolute war."

Extension of Politics

But the most important factor that determines the kind of war that is to be waged, the form that it should take, and the intensity with which it should be fought, depends on the political object of war. "If the whole consideration (of war) is a calculation of probability based on definite persons and relations, then the political object, being the original motive, must be an essential factor in the product." This is an original and unifying thought that runs through the entire treatise—war is only a continuation of state policy by other means. One state may attempt to impose its will on another by appealing to its moral sense, by its leaders going on a great fast, by raising economic barriers or—by going to war. That is, war is one of the many means employed to achieve a particular end and, therefore, it belongs to the province of social life. "It is a conflict of great interests which is settled by bloodshed, and only in that is it different from others." It is a kind of business competition. "State policy is the womb in which war is developed, in which its outlines lie hidden in a rudimentary state, like the qualities of living creatures in their germs." It is policy that prevents war from assuming its true nature in the absolute form. Or as Clausewitz says, it is policy that, "changes the tremendous battle sword, which should be lifted with both hands and the whole power of the body to strike once for all, into a light handy weapon, which is sometimes nothing more than a rapier to exchange thrusts and feints and parries."

Because of the intrusion of politics into

the true nature of war, the latter assumes different shapes and these Clausewitz divides broadly into two kinds: those wars in which the object is the defeat of the enemy, and those in which the object is confined to the acquisition of territory on the frontiers of a country. Clausewitz stresses the importance of distinguishing between these two types of wars, because the strategy involved in waging them is quite distinct. Where the overthrow of the enemy is the object, the final and decisive battle in which the enemy is destroyed is the only factor of importance. In a "limited war," on the other hand, partial success and acquisition of enemy territory help in eventually wearing down the enemy's will to fight. As to the choice of the kind of war, it depends on the political tensions involved and the military resources at one's disposal.

Conclusion

Thus, in reading Clausewitz, we find certain ideas dominate, which no nation can afford to ignore: that war belongs to the province of social life, neither divorced from it, nor extraneous to it: that the survival of a nation is determined by and through wars; that wars cannot be fought without bloodshed. Or to quote Clausewitz's own inimitable words:

> Let us not hear of generals who conquer without bloodshed. If bloody slaughter is a horrible sight, then that is a ground for paying more respect to war, but not for making the sword we wear blunter and blunter by degrees from feelings of humanity, until someone steps in with one that is sharp and lops off the arm from our body.

The Imponderables in War

Translated and digested by the MILITARY REVIEW from an article in "Allgemeine Schweizerische Militarzeitschrift" (Switzerland) June 1953.

THE scene is a field trip of the War Academy in 1938. The class stands at the first conference point in the terrain. The Blue commander is describing the assembly of his troops: ". . . and at this highway intersection here before us, there is now appearing the lead elements of the right regiment."

"No!" says the director, "so far nothing is to be seen of the regiment, near nor far!"

The Blue commander answers: "The regiment was to leave 'A' at 0200 hours. From there to here it is 12 miles. The men make 2.4 miles an hour. If everything went right, the regiment would normally be here now."

Thereupon, the War Academy Commandant who was present said, "It is *normal* in war when things do *not* go right!" That was short and clear. It relieved the director of the need for justification and stifled the unspoken objections of the students.

An imponderable—some unforeseeable delay or disturbance of the planned development of an operation—had occurred. As Clausewitz wrote about this subject:

> Thus, in war, due to the influence of countless minor circumstances which, on paper can never be regarded as pertinent, everything is toned down, and one finds himself far short of his goal . . . . Is there now no moderating oil for this imponderable? Only one, and this one oil is not available at pleasure to the field marshal or the army: it is *experience* in war on the part of the army.

Training

In the training of every army, the imponderables—as a means for creating conditions as they are actually encountered in war—should play a prominent role. This doubtless would contribute much to-

ward familiarizing future commanders with the realities of battle. To be able to imagine the actual occurrences of a military operation so that one is able to reproduce them in a fairly accurate manner in words is, of course, an art. However, even a master in this domain is an amateur in comparison with the ingenuity of the goddess of chance. What would the pupils and supervisors of an instructor say if he, in peacetime training, made use of assumptions such as we have experienced in war? A few examples of such assumptions follow.

A Tactical Exercise

By evening an infantry division, with both its flanks protected, which is in pursuit of an enemy, has reached an area some 9.5 miles north of a river which flows across its path of advance. The division has only one good highway at its disposal. This crosses the river in village "M." There, the division is to force a crossing the following day and take possession of the bridge which, it is hoped, will be found intact.

By dawn of the following day, the reconnaissance unit learns that the enemy has withdrawn. The division immediately plunges after him, giving orders to the leading regiment to take "M" and to form a bridgehead.

When the regiment, advancing along the highway, reaches a point about a mile and a quarter from that part of the village which is north of the river, the movement stops. There is no sound of fighting ahead. A report from the reconnaissance forces which are approaching the river farther to the west, states that the north bank is clear of the enemy but the south bank is rather strongly occupied. Soon afterward, the following report from the leading battalion reaches the regimental commander: "Village of 'M' apparently clear of enemy forces. Further advance on highway impossible as it is blocked by abandoned enemy teams and their vehicles. We cannot get off the highway because of the terrain. Request engineers be sent forward as quickly as possible to clear highway."

The regimental commander, who has just been joined by the division commander says: "I am going ahead immediately," and climbs into his all-terrain vehicle and rushes away—the division commander follows him.

After a short distance, they run onto the battalion commander who is accompanied by the problem director.

The following had taken place between the problem director and the battalion commander. When the battalion on the route of advance had reached a point about 1 mile from the northern edge of "M," the director said: "You can go no farther. As far ahead as you can see, the highway is blocked with tangled, horse-drawn columns. Not even individual mounted men are able to get through. One can get through only on foot. The battalion cannot leave the highway. The highway is bordered on both sides by canals some 33 yards wide and 1½ to 2 yards deep."

Blocked Roads

The battalion commander looks at the map, and says: "Close to the bridge there is a highway leading west out of the village. These columns here before me which, seemingly, no longer wish to fight, are being barred from the village in order that the way to the bridge may be open."

The director replied, "There is something else I have forgotten: there are no troops with those columns ahead of us —only the vehicles with the teams."

The battalion commander questioned, "May I ask how many columns there are here?"

The director answered, "Oh, something like 26 batteries with supporting troops."

The battalion commander said, "I do not believe I understood you correctly."

The director answered, "26 batteries."

The tactical exercise ended with the statement that although there was no enemy in the village, the division entered it with its first vehicle after a delay of 4 hours, which was the amount of time it would take, according to the director, to get the abandoned teams and their vehicles off the highway. Four hours would have sufficed for the enemy to have established a solid defense on the south bank of the river. The division did not get across the river that day. That was what the director had wished.

After the critique, a senior officer spoke concerning the conduct of the problem: "It goes without saying, that the director is sovereign in his assumptions, but I recommend that they be kept somewhere within the bounds of possibility; otherwise it might develop that the troops will not take these problems seriously any longer."

Case History

However, the situation described above was an actual case from war, which the author has clothed in the guise of a tactical exercise. Actually, it happened, in all its details, to the 44th German Infantry Division on 10 June 1940 when it attempted to force a crossing over the Oise at Pont St. Maxence just as the director had described it.

The imponderable lay in the bridge. It caused the German division a day's delay. For the French adversary, it was still more serious for he lost all the artillery belonging to two divisions because the bridge was blown up without regard for the forces which had to use it when the first German reconnaissance forces appeared at the Oise at dawn.

Rivers and Bridges

Generally speaking, rivers and bridges are a common cause of imponderables. Of 25 river crossings during combat, in which bridge building, or the possession or demolition of existing bridges was required, the author saw 12 in which the intended course of the operation was decisively upset, because of the imponderable which occurred.

The famous case of Remagen was not unusual—only the reaction of the Supreme Command to the imponderable was unusual.

The cause of imponderables—as far as these are the consequence of human insufficiencies—resides, in the majority of cases, in the domain of the transmission of information, orders, and reports.

Typical Case

The campaign against the Soviet Union is typical. The LII Army Corps, Seventeenth Army, was in pursuit eastward between the Dniester and the Bug, and was to cross the Bug at Ladyshin. For this purpose, a bridge column from the Seventeenth Army was placed at its disposal.

On 25 June 1941, the advance battalion of the German 101st Infantry Division found an undestroyed bridge north of Ladyshin and toward evening of this day formed a small bridgehead north of the Bug. The 101st Division had, thus, a bridge and could have gotten along without the bridge column if there had not been another river, the Ssod, to cross a few miles beyond the Bug. Whether the employment of a bridge column was necessary for the crossing had to be ascertained as quickly as possible. A notice to this effect was received by the 101st Division in the afternoon. Army pressed the division for the return of the bridge column if it were not needed.

On the morning of the 26th, the 101st Division reported that the Ssod was 5.5 to 11 yards wide. The Corps reconnaissance squadron reported that the Ssod was 11 to 16.5 yards wide at the point of its junction with the Bug. The Corps had doubts and requested a check by the Di-

vision. Toward noon it received the report that the Ssod was 11 to 16.5 yards wide. A bridge column was not necessary. It remained at the disposal of the Seventeenth Army, approximately 6.2 miles back of Ladyshin.

At noon, the Army Commander went to the Division and, at about 1800 hours, on the way back, went past Corps headquarters.

The 101st, maintains that the Ssod is only from 11 to 16.5 yards wide. I regard that as very improbable. I have ordered the Division to check this report again, because I should not like, when we have again made the bridge column available to the Army Group, to find out that the Division needs it.

River Crossing

In the evening report, the 101st Division again repeated its previous statements concerning the Ssod. Around 2200 hours, the Army Commander called and gave the information that the bridge column had now departed for other employment.

On 27 July, the Corps planned to continue its advance over the Ssod. The Division set out at dawn. The first report of the 101st Division was as follows:

East bank of the Ssod strongly occupied by the enemy. Stream 66 yards wide. Crossing with own means not possible. Necessary that bridge equipment be sent.

The LII Army Corps lost one day in its advance eastward. Soon after this, however, it gained a day in an operation for which a longer time had been allotted. These are the normal incidents of war which, not even for an hour, run according to plan.

The repeatedly false information concerning the width of the Ssod, will undoubtedly be looked upon as just plain bungling, not as an imponderable.

Human Element

Clausewitz stated that:

The battalion continues to be composed of a number of men banded together, of whom, when fate wills it so, even the most inconsequential of them is able to bring about a halt or some other irregularity.

The very frequent cause of the imponderable is simply human insufficiency, such as misunderstandings, errors, and oversights. Other psychic defects also may influence combat operations unfavorably, as the desire for fame, lack of discipline, and cowardice.

In such cases, one cannot speak of imponderables—in such events, they are delinquencies.

The consequences of imponderables are, in the reality of battle, not as great as they occasionally appear to be in the headquarters of the higher command or as one may picture them in postwar descriptions and hypothetical studies.

To be sure, they may have far-reaching consequences, but this is the exception. In theory, catastrophies would very often have been avoided and victories won if this or that incident had not occurred. Probably we shall read, some day, that the German armies were unable to seize possession of the oil fields of the Caucasus because a train load of fuel, destined for the First Armored Army, was set on fire between Taganrog and Rostov by a Soviet gunboat about 15 August 1942.

Even in the winter of 1942-43, I heard it said that the Sixth Army was surrounded at Stalingrad only because a large number of the tanks of the 22d Armored Division had the rubber insulation of the electric cables gnawed through by mice. This unit went into the battle with so few tanks that success was denied it in the counterattack.

Conclusions of this sort are erroneous to begin with for the reason that their authors, in the consequences of the imponderables, assume a "normal course of events" and do not take into consideration that the imponderable is neither a thing that happens but once, nor the fact that there are also fortunate occurrences in

war which compensate for the unfortunate ones.

Unit Reaction

Finally, the units themselves, being living groups, not only possess high regenerative power but also great capacity for overcoming the imponderables without either the orders or the help of the higher commands being required. This constructive peculiarity of the units is largely dependent on the initiative of the lower commanders and also of the men themselves. They react spontaneously, on the basis of the occurrence itself. Only a unit which, as a result of over fatigue, over exertion, or decimation, has lost its normal capacity for reaction, is predisposed to more serious consequences in the event of an unusual occurrence. Nevertheless, there are, among the multitude of individuals constituting a living group of this magnitude, enough men of quick reaction to enable the group to overcome the unforeseeable events.

The Commander

The reaction of the commander is often one of the weightiest consequences of the imponderable.

In the case of the senior commander who learns of the event in an indirect manner, matters are different. He does not experience the imponderable itself, only its consequences in most cases, and his judgement of the event will be a function of the seriousness of these. His reaction does not derive spontaneously and naturally from reality, but is the product of his power of imagination. The less a commander is capable of correctly imagining realities that he himself is not experiencing at the moment, the more he is in danger of reacting improperly.

If the imponderable can be a test of the worth of a troop unit, it can unquestionably be one of the worth of a commander.

How the commander reacts to unforeseen difficulties is more revealing and, at times, unfortunately, weightier in consequences, than one would be inclined to believe.

Essentially, three types of reactions are to be distinguished: the commander, of the first type, who immediately calls for the responsible person; of the second type, who requests aid of a higher echelon; and of the third type, who ascertains what he can do to compensate for the disadvantageous consequences of the imponderable or even to prevent them, then acts.

Not until everything has been done to overcome the difficulty that has arisen with his own means, will the good commander think of investigating the original cause of the event.

Weak Commanders

The commander of average worth thinks first of the responsible party and of the help he may be able to get from his neighbor or the superior echelon. "The call for help is the most primitive form of command!" one of the keenest-minded chiefs of staff of the last war once remarked. Nothing more need be added to this.

We should pause a bit and consider the "cry for the guilty person." This is often the mark of the most dangerous type of commander—of the erudite, militarily gifted man without character, who is so difficult to render harmless. Defects of character reveal themselves but slowly, and are not recognized when the situation is dominated by considerations of a military character.

The commander who, in case of an imponderable, first calls for the guilty party, will usually reveal by this action that he is trying to push the responsibility for the occurrence off onto some other person. Just as Hitler did when he, after the encirclement of the Sixth Army, threw

General Heim into prison or, after the crossing of the Remagen Bridge by the Americans, had the bridge commander shot. The cry for the guilty party as loudest reaction to an imponderable, first of all, dams up the spring of truth. Naturally, the event will be investigated—for, as a rule, they are very instructive. But he who believes that through the fixing of the blame, he will benefit his unit in any way from the standpoint of instruction, is still ignorant of the nature of war.

River Width

In the case of those repeated, but incorrect, reports concerning the width of the Ssod, it never occurred to the Corps headquarters or the Army, to search out the party who was to blame. A search for the guilty party would not have brought correct information concerning the width of the stream, any more than their repeated requests for this information did.

The Corps headquarters, however, was more interested in the cause. One of its officers sought information on this subject from the unit concerned, immediately after the crossing of the river—not as an investigator sent out by the higher command, but as a friend of the men. He reached the unit at a moment of success, hence at a time when persons are more likely to be willing to admit a past mistake. It turned out that the reconnaissance forces, because of enemy fire, had had to seek shelter some 50 yards from the stream, hence had not gotten close to its bank. Seen from this angle, the stream looked narrow to them and this impression was heightened by the fact that a growth of rushes occupied a band in the water along both sides of the stream. The Corps headquarters made no suggestive reproof, but reported the occurrence, together with causes and results, in a form that awakened the interest of the unit.

Conclusion

Human insufficiencies cannot be included in the concept of "blame." Through the punishment of a guilty person or through censorious and reproving allusions to existing regulations, imponderables will not be eliminated. Only one thing is helpful—the dissemination of the lesson in such a way that the lessons taught by the event will arouse interest. But to bring the matter of blame before the unit, will turn the latter's attention in the case only to the guilty party. War experience, as one of the principal factors in the fighting value of a unit, falls short when personal matters are placed in the foreground, when *what happened* should have been of the greatest importance.

It is clear that the situation differs when we have to deal with misdemeanors rather than insufficiencies. When the imponderables constitute the rule with a unit, rather than the exception, there must be no delay in giving the unit a new commander.

Only the incompetent person is continually in a jam.

Our Army, Navy, and Air Force will always be no better and no worse than the individuals who comprise them.

Secretary of the Navy Robert B. Anderson

BOOKS OF INTEREST TO THE MILITARY READER

BACK DOWN THE RIDGE. By William L. White. 182 Pages. Harcourt, Brace and Company, New York. $3.00.

BY LT COL EDWARD J. WHITELEY, *MC*

This is a vivid, factual account of our wounded in Korea along their path of evacuation across rough and rugged terrain. Mr. White has presented, in his usual realistic style, a highly descriptive and sometimes repulsive picture of the fate of the battle casualty from the time the company aid man reaches him until he is winging his way, by air, across the Pacific. He tells of the courage and usually silent suffering of the wounded and how they are handled along the route by litter, jeep, ambulance, and air evacuation. A succession of incidents describes their treatment along this chain of evacuation, including stops at the battalion aid station and Mobile Army Surgical Hospital (MASH). Each wounded man, as his story is told, becomes a singly important individual and, as many of these men are treated, the vital role of each link in the chain is revealed. Prompt evacuation, early definitive treatment, and the use of whole blood, all of which have aided in the lowering of the mortality rate of the wounded, are well emphasized.

The author has given the Armed Forces Medical Service in Korea a well-earned citation for its work in bringing the men "back down the ridge." The imperative need for whole blood, dependent on the flow from donors in the United States, is constantly before the reader, who, finally, is again impressed that war is hell.

THE WHITE RABBIT. By Bruce Marshall. 262 Pages. Houghton Mifflin Company, Boston, Mass. $3.50.

BY MAJ DANIEL J. KERN, *USAR*

The "White Rabbit" was the code name given to Royal Air Force Wing Commander F. F. E. Yeo-Thomas by the French resistance. This book is the narrative, often exciting, of his work in attempting to co-ordinate the activities of the many guerrilla groups that arose in France after the surrender in 1940; his eventual capture by the Gestapo, and torture at their hands; his sentence to Buchenwald; changed identities; and final escape is an incredible record of bravery, barbarity, luck, endurance, and sheer guts.

The book, unwittingly perhaps, emphasizes the generally indecisive character of guerrilla operations, while it notes, again unwittingly perhaps, the important morale and ideological contribution such activities may make to the final offensive efforts of mass armies.

The author's persistent penchant for wringing the last drop of theological implication out of any given situation occasionally slows down the otherwise fast-moving narrative. In justice to Marshall's style, however, his satiric jibes sometimes strike and fulminate with all the impact of a vicious blow by Dean Swift.

THE CHALLENGE TO AMERICAN FOREIGN POLICY. By John J. McCloy. 81 Pages. Harvard University Press, Cambridge, Mass. $2.00.

STILWELL'S MISSION TO CHINA: The China-Burma-India Theater. By Charles F. Romanus and Riley Sunderland. 441 Pages. Superintendent of Documents. U. S. Government Printing Office, Washington, D. C. $5.00.

BY MAJ ROGER E. LAWLESS, *SigC*

This is the first of a three volume subseries telling the history of the United States Army in the China-Burma-India theater, and is part of the series, THE UNITED STATES ARMY IN WORLD WAR II. Based principally on War Department records, this volume narrates the high-level planning and policy debates over China during the period of 1941-43.

Its central theme is the story of General Joseph W. Stilwell's efforts to carry out the orders of General George C. Marshall ". . . to improve the combat efficiency of the Chinese Army and to increase the effectiveness of United States aid to China." New light is thrown on the Stilwell story by use of the General's personal papers, which were opened for the first time in May 1950.

The volume does much to offset popular misconceptions of General Stilwell's role in China. The harassed General, at various times blamed for allied wartime and postwar blunders in China, was actually a high-ranking person who could be conveniently charged with all the sour politics, corruption, and military somnambulism that took place.

The volume traces the origins of the pre-World War II United States program of equipping 30 Chinese divisions, a 500-plane Chinese air force, and a line of communications to China from Rangoon. It describes the complicated allied command situation that developed in China, Burma, and India, and details the First Burma Campaign. New Japanese material gives a glimpse of the other side of the story. Stilwell's futile efforts to command three Chinese armies in Burma, under the over-all command of General Sir Harold R. L. G. Alexander, are narrated. After his famous trek out of Burma to avoid being trapped by the Japanese, Stilwell presented major proposals to the Chinese, American, and British Governments. The full text of these proposals, found in Stilwell's personal papers, are presented for the first time. It is sad to relate that most of the proposals were ignored.

The book discusses Chiang Kai-shek's famous "three demands" of 29 June 1942 (three United States divisions to Burma, 500 combat planes to China, and a 5,000-ton monthly airlift—all by *September*) to his alliance with the United States. It sets forth Stilwell's plans for a Burma campaign to break the land blockade of China and his analysis of what each of the three allies—Britain, China, and America—could contribute in a new campaign.

As the fall of 1942 wore on, a major difference developed over the timing of and allied air effort in Asia. Previously unpublished documents from the papers of the late Harry L. Hopkins highlight the episode. The dramatic climax came at the Washington conference of May 1943, when President Roosevelt decided to back the air strategy advocated by Major General Claire L. Chennault, rather than the ground force strategy favored by Stilwell. The air commander had been permitted by the President to communicate with the White House directly, circumventing Chennault's superior, General Stilwell. In one such letter, hand carried from China by no less than Wendell Willkie, Chennault promised to ". . . accomplish the downfall of Japan . . . with 105 fighters, 30 medium bombers, and 12 heavy bombers." At the time (October 1942), the defeat of Japan was only being visualized by an attack mounted from China and not the blockade and bombardment method from the Pacific islands, the method finally employed.

THE ARMY AIR FORCES IN WORLD WAR II. The Pacific—Matterhorn to Nagasaki. Edited by W. F. Craven and J. L. Cate. 875 Pages. The University of Chicago Press, Ill. $8.50.

BY MAJ JOHN N. HIGHLEY, *USAF*

This volume completes the story of the United States' first venture into global warfare. A review of our past military history shows that we have been engaged in different parts of the world many times before; but only with expeditionary forces in rather limited areas. In World War II, we were required to fight, at the same time, all over the globe, and this is especially true in regard to our war against the Japanese Empire. To fight a war of this type and in this area, our leaders were required to make plans and decisions that had no precedent. This book, then, is the final accounting of those many plans, decisions, and actions.

It is a history of the Seventh Air Force's progress with Admiral Nimitz from Hawaii through the many scattered islands and atolls of the Pacific, with the final ending on Okinawa. It includes the Seventh Air Force's tactical bombing effort against the Chinese mainland and the Japanese homeland; and the parallel effort of the Fifth and Thirteenth Air Forces' progress with General MacArthur from Australia through the East Indian islands into the Philippines and eventually to the Japanese homeland via Okinawa.

It is also a history of the fulfillment of a new concept, strategic air warfare. Although proved successful in the European conflict, the results of this air effort in the Pacific campaign are proof of the validity of the strategic air concept. The actions of the *B-29s* of the Twentieth Air Force, the 20th Bomber Command in China, and the 21st Bomber Command in the Marianas proved to be the decisive point of the war.

This concept was so new to the world that we never realized that the victory had been won and that the enemy had been defeated without an invasion of his homeland. It was not until after much more unnecessary destruction to both the enemy and ourselves, including the atom bombings of Hiroshima and Nagasaki, but at least before the planned November invasion of the Japanese islands, that the surrender occurred.

GRANT AND HIS GENERALS. By Clarence E. Macartney. 352 Pages. The McBride Co., New York. $5.00.

BY MAJ ORAN K. HENDERSON, *Inf*

Each of the book's 14 chapters carries the reader from the earliest moment of meeting between General Grant and the officer discussed, and ends with either the cessation of hostilities or the military career of the officer concerned; whichever is earlier. Consequently, the author has traveled, upon completion of the book, the length of the Civil War 14 separate times. In later chapters, the repetition is particularly noticeable. However, this pattern does assist the reader in maintaining clarity and continuity if he is unable to complete the volume in a few sittings. An interest is maintained throughout the reading by the lively development of military and political intrigue, the power of public opinion which was always prevalent, and an important factor throughout the history of the war.

Of particular interest is the chapter on General W. F. Woods whose worth to the success of the Union Army cannot be belittled.

Ample use has been made of many recognized historical records which the author has used in the form of quotations. These rich excerpts add a lively savor to the work. The author has not attempted to draw conclusions, and where controversial issues develop, he openly presents just the available facts.

I JOINED THE RUSSIANS. By Count Heinrich von Einsiedel. 306 Pages. Yale University Press, New Haven, Conn. $4.00.

BY LT COL RICHARD B. KREUTZER, *Arty*

In this easily readable book, Count Heinrich von Einsiedel—the grandson of Bismarck—relates his experiences as a prisoner of war interned by the Soviets, and his conversion to communism only to renounce it after his return to German soil.

The story begins with Einsiedel, a Nazi fighter pilot with 35 enemy planes to his credit, involved in a furious air battle over Stalingrad in 1942. After having been shot down in this action, Einsiedel is taken as a prisoner to various prisoner of war camps in the vicinity of Moscow where he is increasingly subjected to the Marxian theory, to which he eventually becomes a convert.

Together with a group of Nazi officers, including several high-ranking Prussian officers such as Field Marshal von Paulus and General von Seydlitz, he was instrumental in the formation of the National Committee for Free Germany which denounced Hitler and believed the salvation of Germany was co-operation with the Soviet Union. This group, through radio and leaflet propaganda, attempted to propagate defection among the *Wehrmacht* rank and file and thus hasten the termination of what they believed was a senseless war. Count Einsiedel skillfully, in diary form, relates the steps instrumental to his complete acceptance of the Communistic doctrine and outlines the Soviet methods of conversion.

With the end of the war, Einsiedel returned to Berlin where he served on a Communistic newspaper. It is in this position, after contact with the people of Western Germany, that he learned the shallowness and deceptiveness of communism, and as a result, denounced it in favor of freedom and security. In the last few pages of the book, Einsiedel indicates the weakness in the Soviet system and predicts its eventual downfall in that the conscience, the soul, and the faith of mankind will not be conquered by Soviet secret police methods.

SUEZ CANAL ZONE IN WORLD AFFAIRS. By Hugh J. Schonfield. 174 Pages. Philosophical Library, New York. $4.50.

BY COL FREDERICK H. LOOMIS, *Inf*

This book not only deals with the importance of the Suez Canal in world affairs, but is a comprehensive study beginning with the building of the canal and continues right up through our own time.

The work of an Englishman, Thomas Waghorn, was one of the major contributions toward the advancement of the Canal, although England continued to agitate against the Canal by opposing Austria and France. These nations were made to distrust the other's motives. The construction of a railway, instead of a canal, gave England a monopoly. The British became victorious in this fight when the stretch of railway from Alexandria to Cairo was completed in 1854.

The Suez was designed to serve the cause of peace through the promotion of travel and trade between East and West. It has played a great part in our history and is of great importance in world affairs.

The book is well written and gives the reader a wide range of study of the history of the Suez Canal; the role it has played in World War I and World War II, and in the political ambitions of the world powers. Because of the alignment of world powers today and of the importance of the Near East in world affairs, the book is well worth reading.

U BOAT 977. By Heinz Schaeffer. 260 Pages. W. W. Norton & Company, Inc., New York. $3.50.

THE ATOM STORY. By J. G. Feinberg. 243 Pages. Philosophical Library, New York. $4.75.

BY LT COL E. VAN RENSSELAER NEEDELS, *CmlC*

The story of the atom begins in a vision and ends in a nightmare. As told in this volume, it is a romance of the realization by the ancient Greek, Democritus, that all matter is made up of minute, finite particles, examined by Priestly, Cavendish, Rutherford, and others, and finally exploded with awe-inspiring results at Alamogordo, New Mexico, on 16 July 1945.

In clear, nontechnical language, the author traces, step-by-step, the discovery of the nature of the atom and how it may be utilized as the savior or the nemesis of man.

At first glance, it appears that the role of the British scientist is a bit overplayed. However, in discussing the atom and the human race in war, the British take full share of their contribution and responsibility in the headlong drive to achieve this mightiest of weapons.

The possibilities for utilization of atomic energy for the betterment of man, through radioactive treatment of diseases, and by conversion into controllable power sources are discussed without sensationalism, in an authoritative manner.

The most important aspect of the atom story is the moral. Who is to say whether the destruction in Hiroshima and Nagasaki was more terrible than the lives it would have cost in both Japanese and American soldiers if an invasion of Japan had been required? Atom bombing just cannot be considered out of context.

As Dr. Feinberg states, "The atom bomb could no more have been skipped in the martial progression of the human race than any other product of social or technological evolution . . . one thing is certain: for better or for worse, for richer or for poorer, in peace or in war, the destinies of the atom and the human race are now insolubly wedded, unless the human race, itself, dissolves the union by plunging to self-annihilation."

THE FACE OF THE ARCTIC. By Richard Harrington. 369 Pages. Henry Schuman, Inc., New York. $6.00.

BY LT COL JOHN S. ZIMMERMAN, *Arty*

This volume is the result of five journeys into the bleak and desolate Canadian far north. Cameraman-author Richard Harrington has brought back a collection of beautiful pictures portraying life in that frozen world.

The author takes the reader on a patrol with a constable of the Royal Canadian Mounted Police, visiting missionaries, seal hunters, and white trappers. What he depicts are pictures of happy, nomadic people in a perpetual battle against the bitter cold.

The pictures were taken at temperatures of 40 to 60 degrees below zero. Lens opening and shutter speed were always preset to allow rapid picture taking. Pictures had to be taken in not more than 2 minutes as the camera shutter and finger tips would freeze.

Richard Harrington has given us a warm and human book, written not as a report by a professional traveler, but as a narrative by a man who is drawn irresistibly to the solitude of the cold and the snow. He writes, "It was not photography alone that drew me back again and again to the far north. There I felt a peace I could not feel outside. It was a way of life—the calm, the force, the relentless ever-present penetrating cold, the serenity of mind, the daily fight for survival."

THE NEW RED ANTI-SEMITISM: A Symposium. Edited by Elliot E. Cohen. 58 Pages. The Beacon Press, Boston, Mass. $1.50 hard bound, $.75 paper bound.

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